mLIMS 2014 User Manual

Last Update: April 2014

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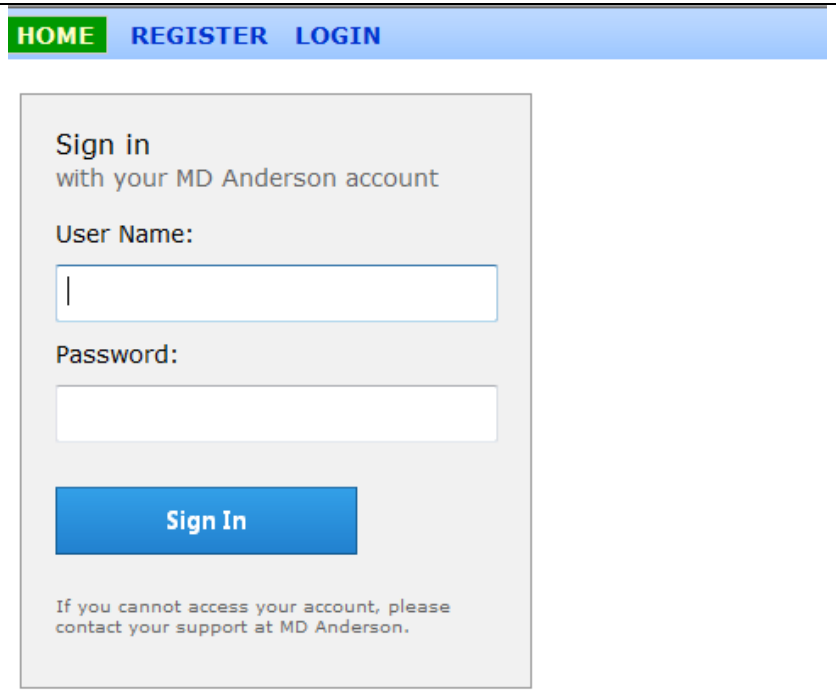
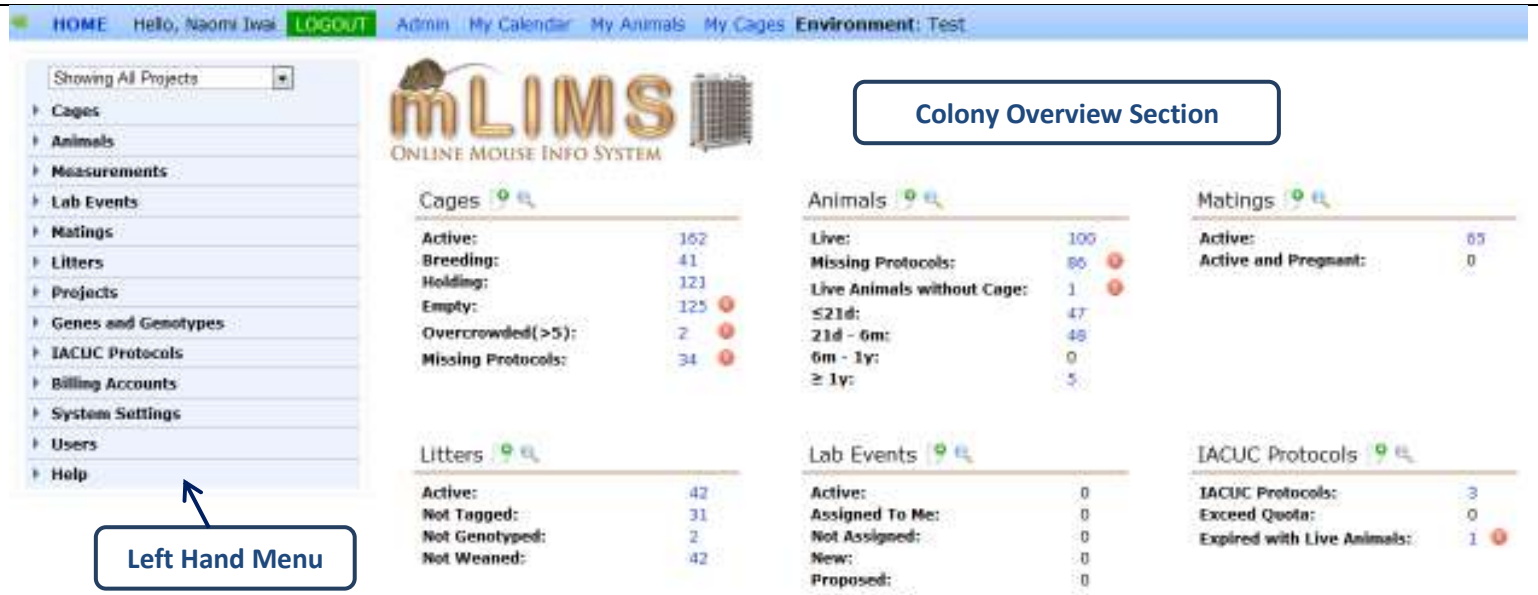
Section 1Getting Started With mLIMS

Log in to mLIMS	
1. www2.mlims.com	
2. Enter your User Name and Password and click on Sign In	

The mLIMS Home Screen

In the home screen there are two areas of navigation: the **left hand menu** and the **colony overview section**.



Section 2 Setting Up Your mLIMS System

This section explains how to set up system settings for the whole lab. This setup should be performed by a designated person in the lab (who we will call '**lab mLIMS manager**' in this manual). The lab mLIMS manager should be the only user in the lab who has full access in the system (besides the PI).

Manage User Permissions

1. **In left hand menu, select System Settings > Users Permissions**

You will see a table with the names of the users in your lab and various permission levels.

2. For each user, decide which permission level to give and check the respective check box(es)

(You can return at any time to this table and change permission levels by checking/unchecking check boxes.)

Users Permissions

Members	Full Access	Create Records	Introduce New Values to Drop Down Menu	Update Other Researchers' Records	Access To System Settings	Access To User Management	Access To Genes and Genotypes Management	Access To Protocol Management	Access To Billing Account Management
Default Settings	☐	☐	☐	☐	☐	☐	☐	☐	☐
System Manager	☑	☑	☑	☑	☑	☑	☑	☑	☑
Viji Chakravarthy	☐	☑	☐	☐	☐	☐	☐	☐	☐
Debra Montague	☐	☑	☑	☐	☐	☐	☐	☐	☐
Naomi Iwai	☑	☑	☑	☑	☑	☑	☑	☑	☑
Jane Doe	☐	☑	☑	☑	☐	☐	☐	☐	☐

3. Click Save

Save Reset

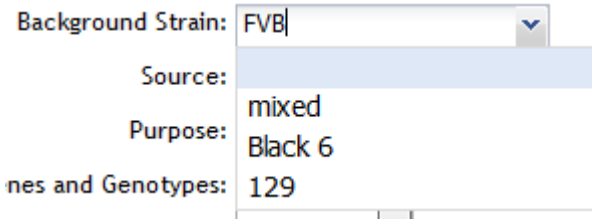
Description of user permission levels:

Full Access: If you check this check box, user will have full access to the system.

Create Records: User can create records

Introduce New Values to Drop Down Menu: User can not only select from existing options in a drop down list, but also type in new values.

In below example, if you have permission to introduce new values, you can type a value that does not exist in the drop down list (e.g. FVB). If you don't have this permission, you can only choose from the pre-set values in the list (these values are set up in Settings by the lab mLIMS manager).



For most users, 'Create Records' and 'Introduce New Values to Drop Down Menu' should be sufficient.

It is highly recommended that you restrict the following permission levels to the lab mLIMS manager:

Update Other Researchers' Records: User can make updates to all other lab members' data

Note: in mLIMS, all users have read-only access to all data in the lab. In other words, you can see everyone's data and everyone can see your data. However, update/edit access to others' data is restricted and is controlled here in Users Permission table. To grant a user update/edit access to all records in the lab, give this user Update Other Researchers' Records permission. You can also grant a user update/edit access to a specific Project: see Section 4 Setting Up Your Projects for more details.

Access To System Settings: User has access to Settings

Access To User Management: User has access to the Users Permissions table and to the Users tool

Access To Genes and Genotypes Management: User has access to the Genes and Genotypes tool

Access To Protocol Management: User has access to the IACUC Protocols tool

Access To Billing Account Management: User has access to the Billing Accounts tool

Note to Houston users: If you don't need to manage billing accounts, uncheck Access To Billing Account Management so that Billing Account fields do not display in the system.

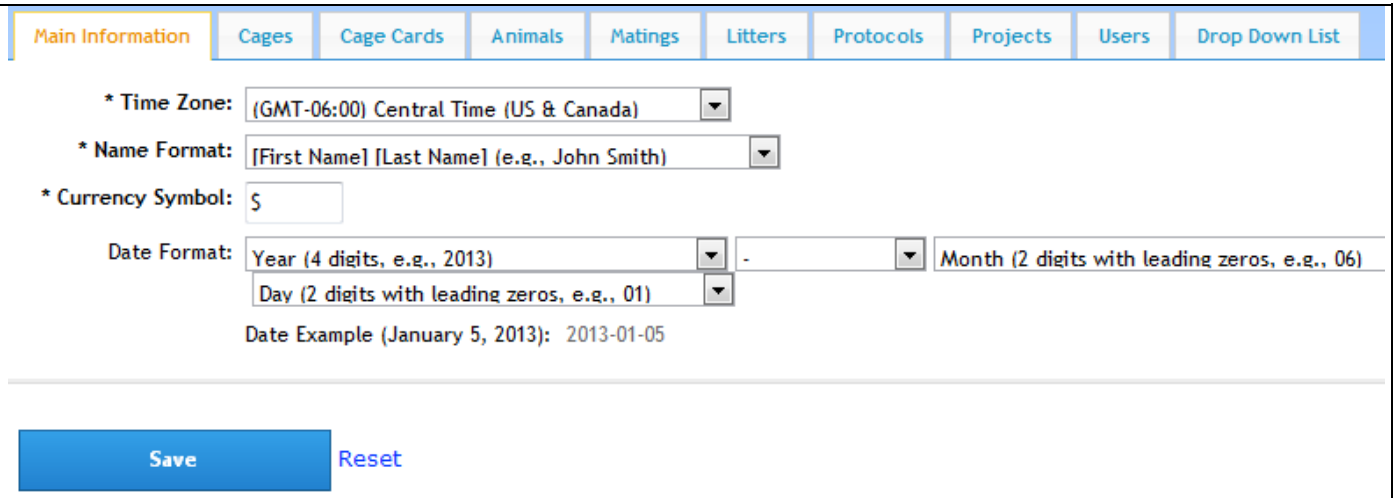
Set Up Settings For Your Lab

Before entering data into mLIMS, it is important to set up settings for the lab. It is highly recommended that permission to Settings is restricted to the lab mLIMS manager(on how to manage user permissions, see above Manage User Permissions). The lab mLIMS manager should be responsible for setting up the lab settings and making changes if necessary.

1. **In left hand menu, select System Settings > Settings**

2. Main Information tab:

Select your preferred time zone, date format etc.



3. Cages tab: Main Information

Cage Capacity: set to 5 (mLIMS will not restrict the number of animals per cage)

Is Cage# Required? Optional/Required/Disabled

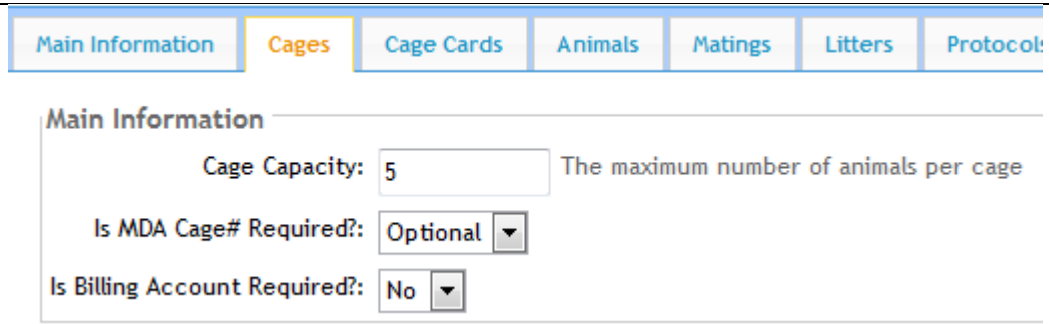
This is the number on the Vet Med cage card.

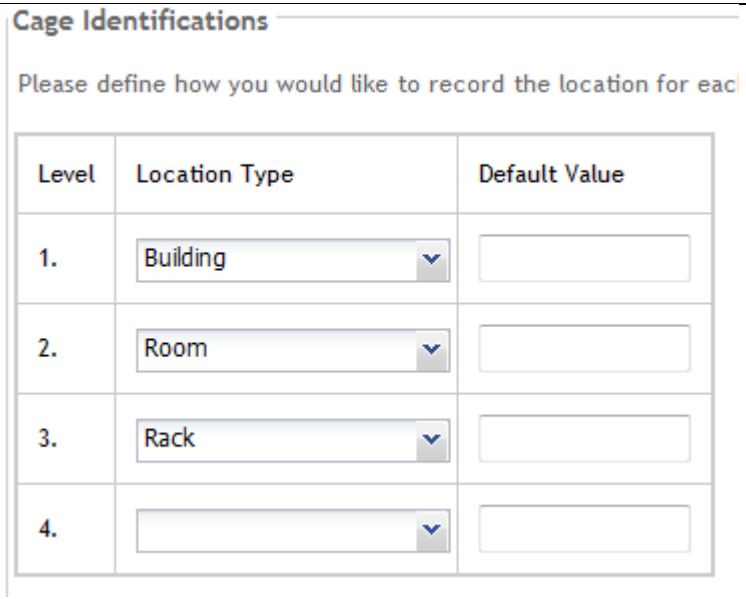
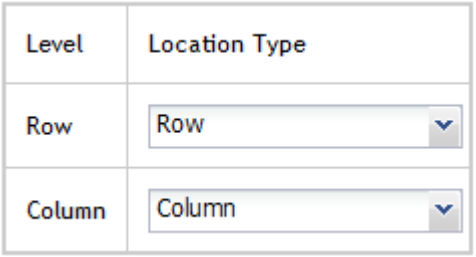
Houston users: Optional is recommended

Smithville users: Disabled is recommended

Is Billing Account Required? Yes/No

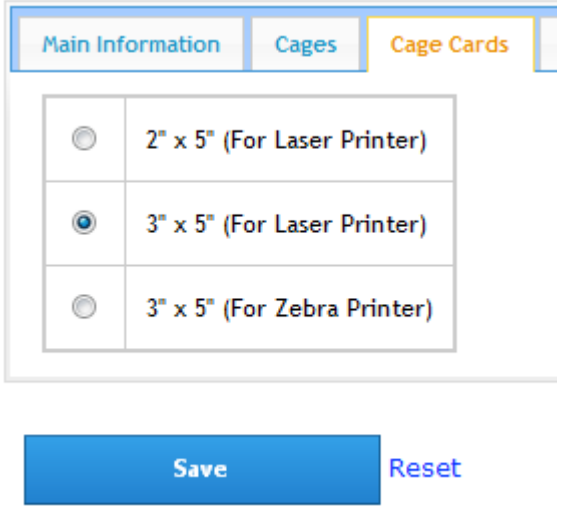
You will not see this question if you unchecked Access To Billing Account Management (see Manage User



Permissions)	
4. Cages tab: Cage Identifications Leave this table as is, don't enter default values (as cage location can be set up in Project. Encourage users to set up their own default cage location per project. For more information, see Section 4 Setting Up Your Projects.)	
5. Cages tab: Cage Identifications (continued) Set up as in screenshot to the right; choose Row and Column	

6. Cage Cards tab:

Select 3” x 5” (For Laser Printer)



7. Animals tab: Main Information

Uses Multiple Species? Yes/No

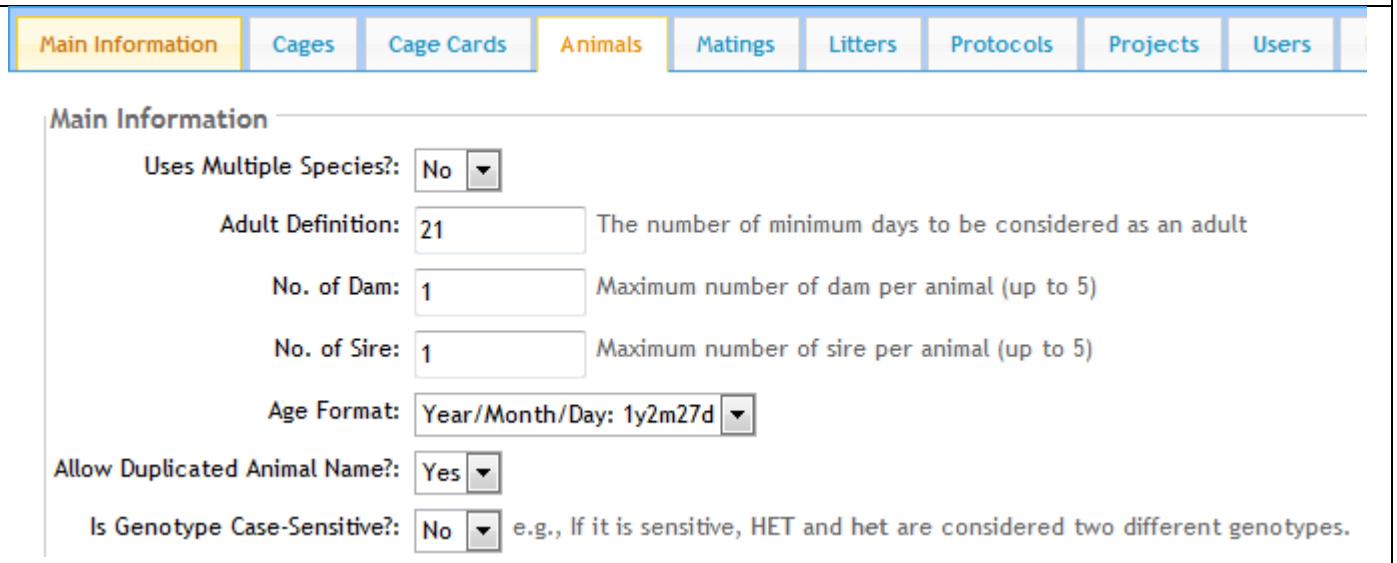
If your lab uses only mice, select No.

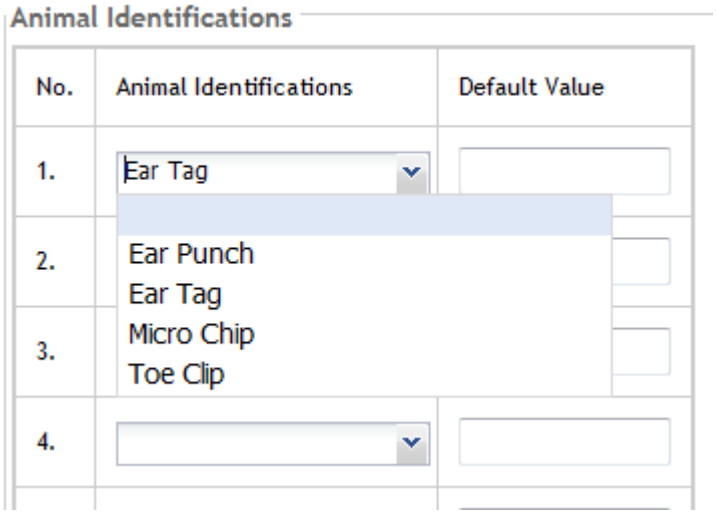
No. of Dam and No. of Sire

Refers to the number of parents per animal: e.g. if you enter 1 for Dam, each animal can have only one mother. (If you frequently use trio matings and get pups for which you do not know who the mom is, you can set the value to 2, and the system will let you record two females as the mom for the pups.)

Allow Duplicated Animal Name? Yes/No

If you choose Yes, users can assign the same animal name to more than one


Main Information
Cages
Cage Cards
Animals
Matings
Litters
Protocols
Projects
Users
Main Information
Uses Multiple Species?: No
Adult Definition: 21 The number of minimum days to be considered as an adult
No. of Dam: 1 Maximum number of dam per animal (up to 5)
No. of Sire: 1 Maximum number of sire per animal (up to 5)
Age Format: Year/Month/Day: 1y2m27d
Allow Duplicated Animal Name?: Yes
Is Genotype Case-Sensitive?: No e.g., If it is sensitive, HET and het are considered two different genotypes.

animal. If you choose No, the system will give a warning when a user tries to assign an animal name that already exists in the lab. **Is Genotype Case-Sensitive?** Please ignore as this is not relevant (all genotypes are set up in Genes and Genotypes. For more information, see Set Up Genes and Genotypes.)	
8. Animals tab: Animal Identifications Choose the primary method of animal tagging in your lab. If you don't see the right option in the drop down menu, you can type in a new value. **Note**: the system currently does not support the use of more than one animal identification method per lab. If more than one method is used in your lab, please choose oneoption with a generic name (e.g. ear/toe tag).	

9. Matings tab:

Allow Female Only Mating? Yes/No

If you have matings for which you do not want to record the sire, select Yes.

No. of Dam per Mating, No. of Sire per Mating

This depends on your lab practice, e.g. if you use onlymatings that are one male – one female, you can set the number of dam per mating to 1.But if you use trio matings, you can set it to 2.

Date Calculations

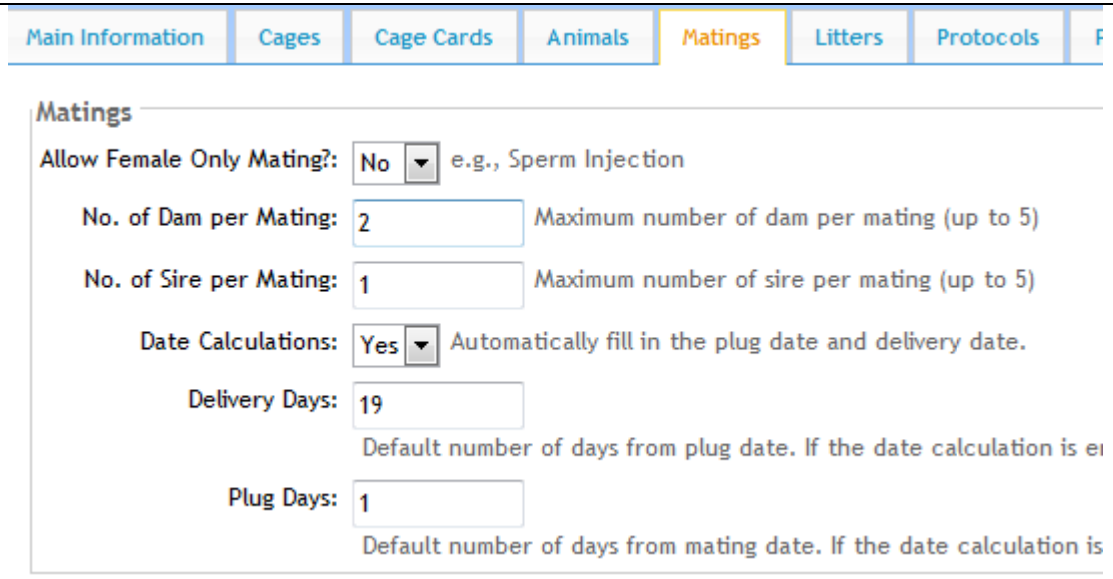
Set to **Yes**

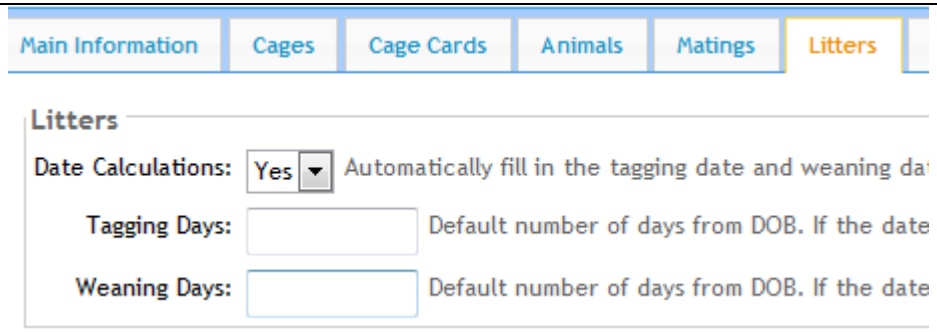
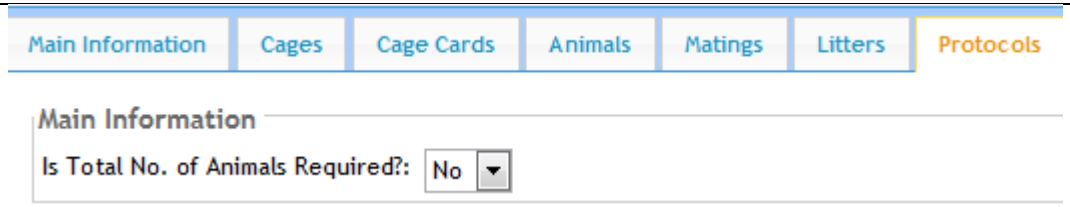
Delivery Days

Enter a default number. Note that delivery days can be set up per Project by each user, which will override the number entered here in Settings.

Plug Days

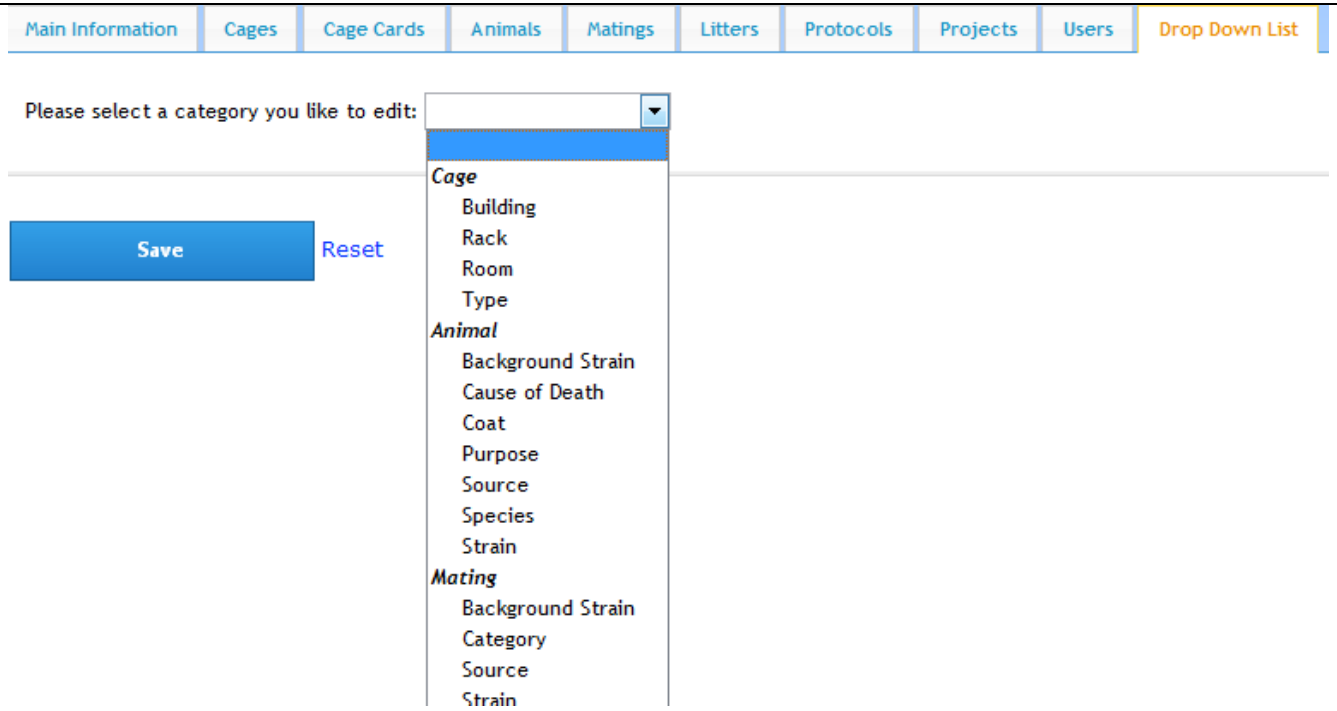
Enter **1**


Main Information
Cages
Cage Cards
Animals
Matings
Litters
Protocols
Matings
Allow Female Only Mating?: No
e.g., Sperm Injection
No. of Dam per Mating: 2
Maximum number of dam per mating (up to 5)
No. of Sire per Mating: 1
Maximum number of sire per mating (up to 5)
Date Calculations: Yes
Automatically fill in the plug date and delivery date.
Delivery Days: 19
Default number of days from plug date. If the date calculation is e
Plug Days: 1
Default number of days from mating date. If the date calculation is

10. Litters tab: **Date Calculations** Set to **Yes** **Tagging Days and Weaning Days** **Leave Blank** (let each user set this up in their Projects)	
11. Protocols tab: **Is Total No. of Animals Required?** Set to **No**(unless you want to make entry of Total Animals Quota mandatory, see Create IACUC Protocol)	
12. Projects tab: **Is Billing Account Required?**	

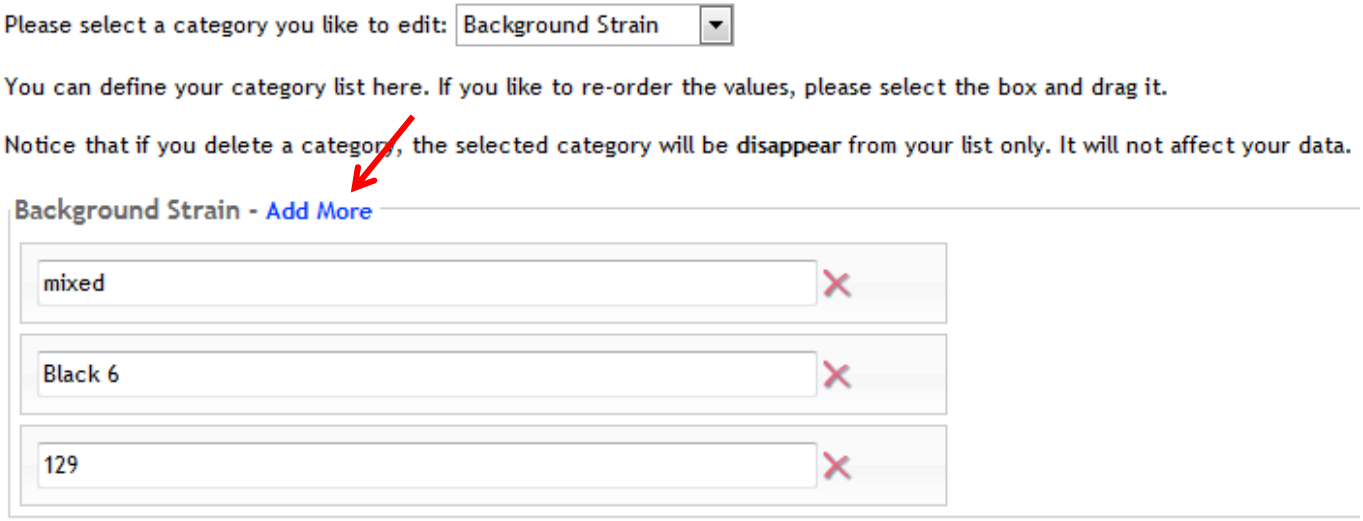
13. Drop Down List tab:

Here you can set up drop down menu options for your lab.



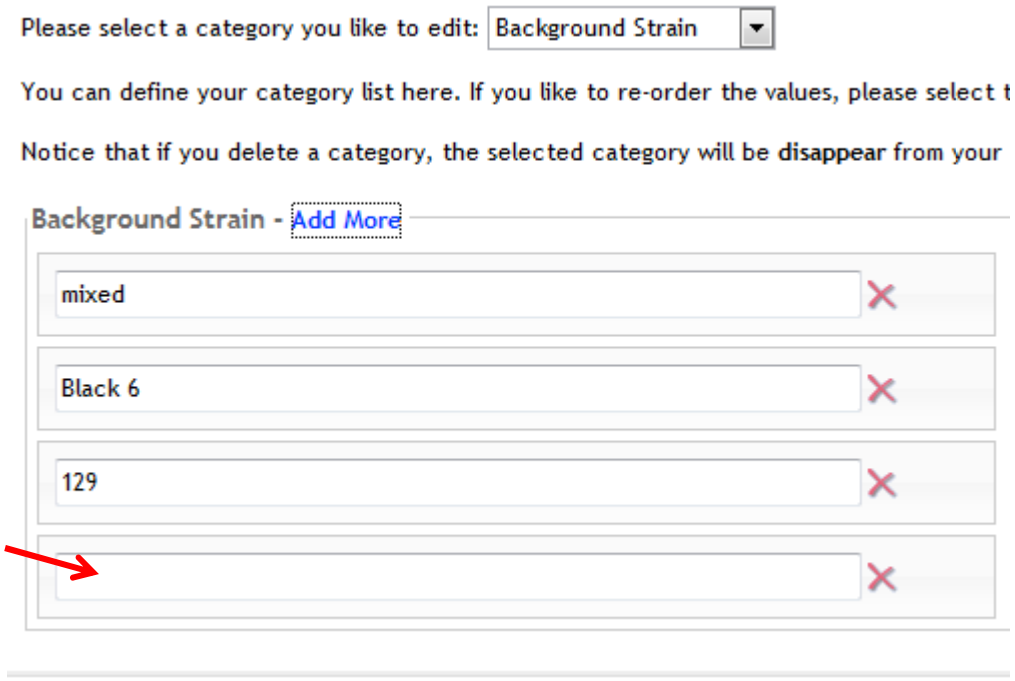
14. Drop Down List tab (continued)

For example, select category Animal Background Strain. Click on 'Add More'.


Please select a category you like to edit: Background Strain
You can define your category list here. If you like to re-order the values, please select the box and drag it.
Notice that if you delete a category, the selected category will be disappear from your list only. It will not affect your data.
Background Strain - Add More
mixed
Black 6
129

15. Drop Down List tab (continued)

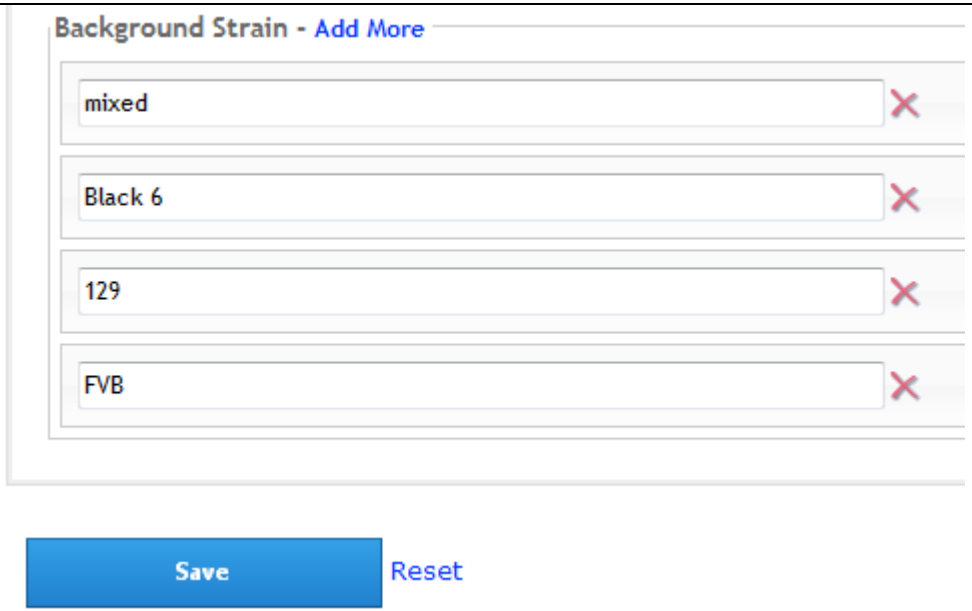
A new field will appear. Type in your new value and click Save.


Please select a category you like to edit: Background Strain
You can define your category list here. If you like to re-order the values, please select t
Notice that if you delete a category, the selected category will be disappear from your
Background Strain - Add More
mixed
Black 6
129

16. Drop Down List tab (continued)

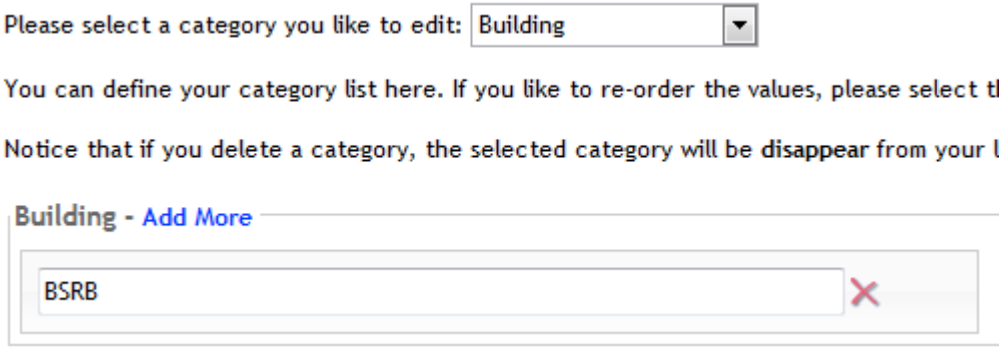
You can change the order of how values appear by dragging each field up and down.

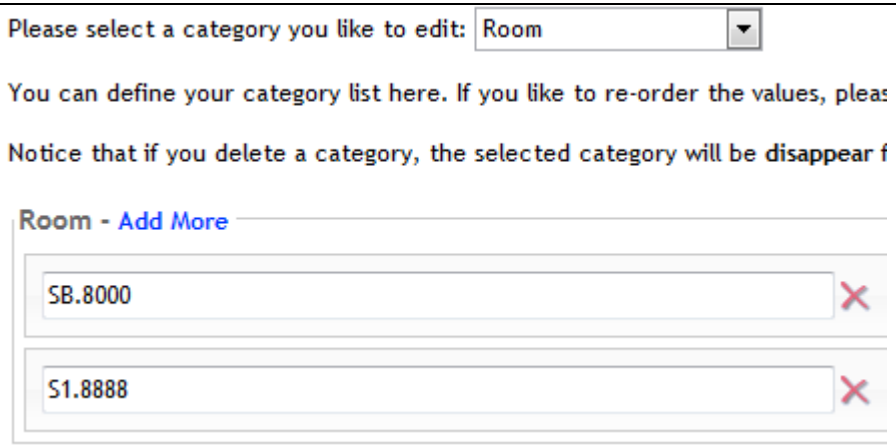
You can delete a value by clicking on the x sign at the right.

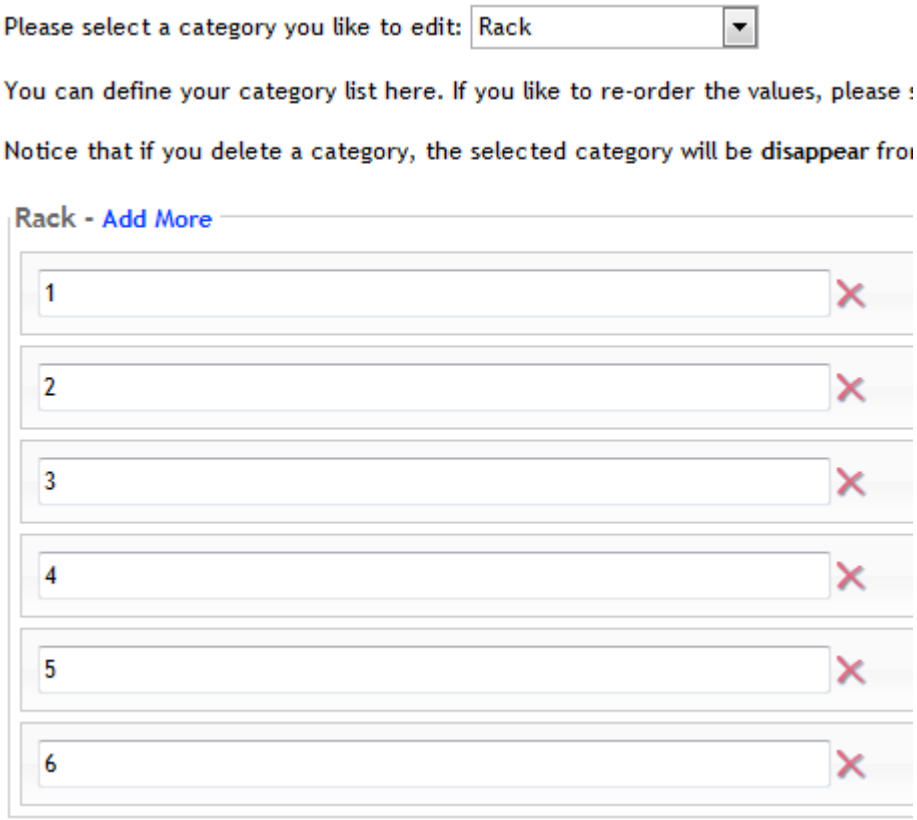


17. Drop Down List tab: Cage Location

<u>It is important to set up all cage location options (Buildings, Rooms, Racks) for the whole lab, especially if you want to use the Cage Map feature</u> (see Section 6 Cages, Cage Map)

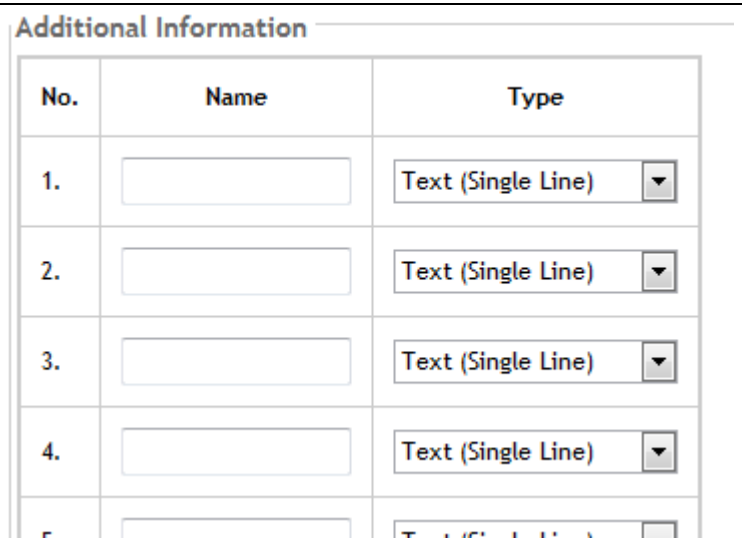

Please select a category you like to edit: Building
You can define your category list here. If you like to re-order the values, please select tl
Notice that if you delete a category, the selected category will be disappear from your l
Building - Add More
BSRB

	 Please select a category you like to edit: Room You can define your category list here. If you like to re-order the values, pleas Notice that if you delete a category, the selected category will be disappear f Room - Add More SB.8000 S1.8888


Please select a category you like to edit: Rack
You can define your category list here. If you like to re-order the values, please
Notice that if you delete a category, the selected category will be disappear fro
Rack - Add More
1
2
3
4
5
6

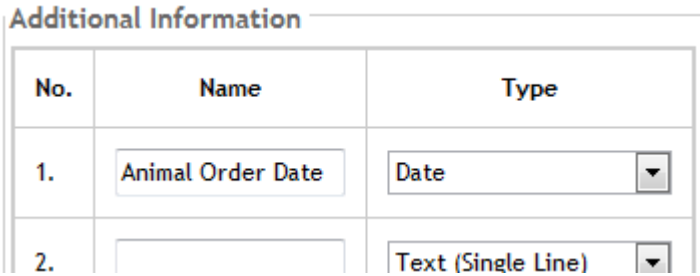
Additional Information fields

In most tabs, you will see a section called Additional Information:



Here you can define your own custom fields if there is data you would like to record that is not already available in the system.

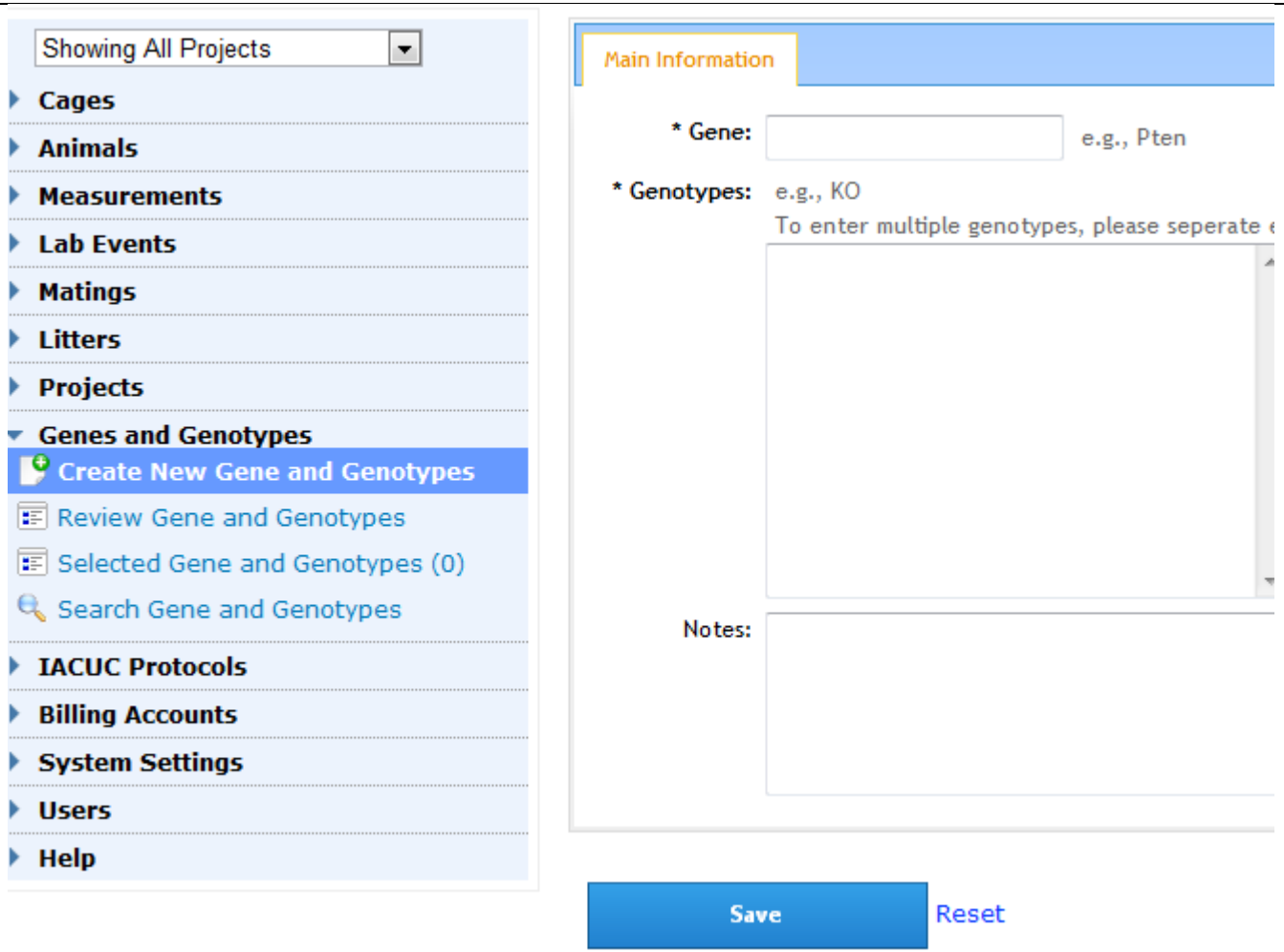
Example:



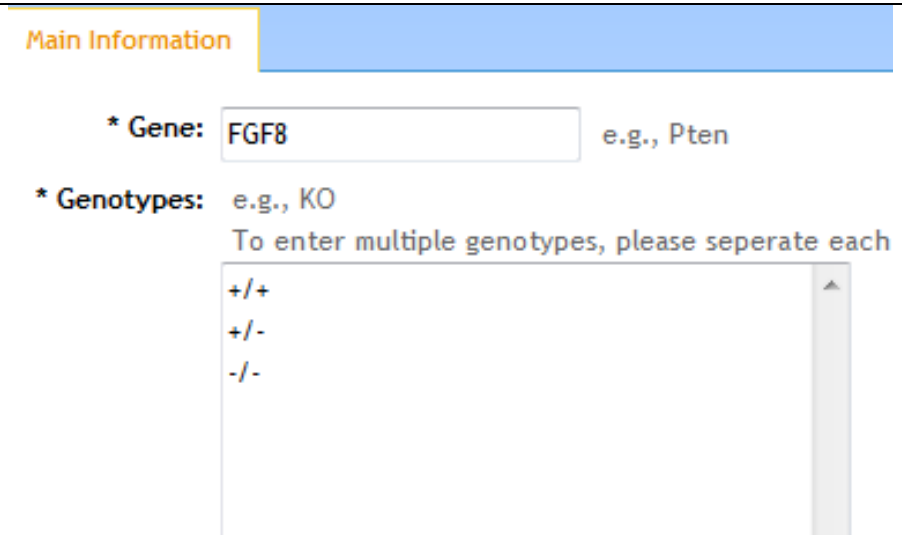
Set Up Genes and Genotypes

Set up all genes and genotypes that are used in the lab. You can always return to edit or add more genes and genotypes.

1. **In left hand menu, select Genes and Genotypes > Create New Gene and Genotypes**

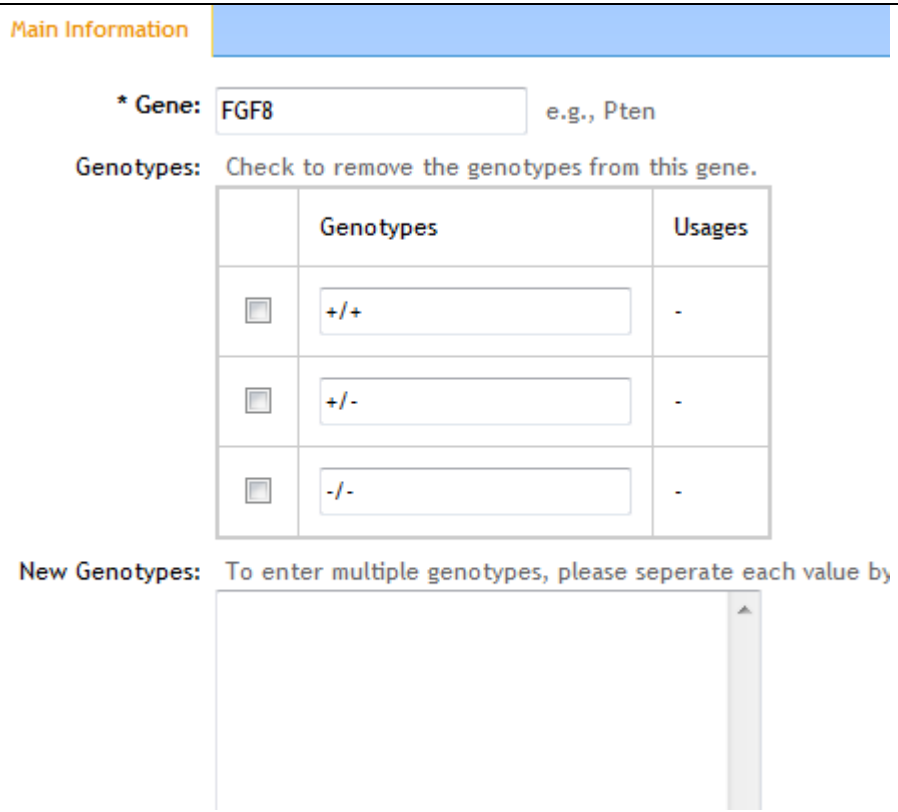


2. **Enter the gene name in Gene field.**
3. **Enter all possible genotypes in Genotypes field (in separate lines, see right).**
4. **Click Save**



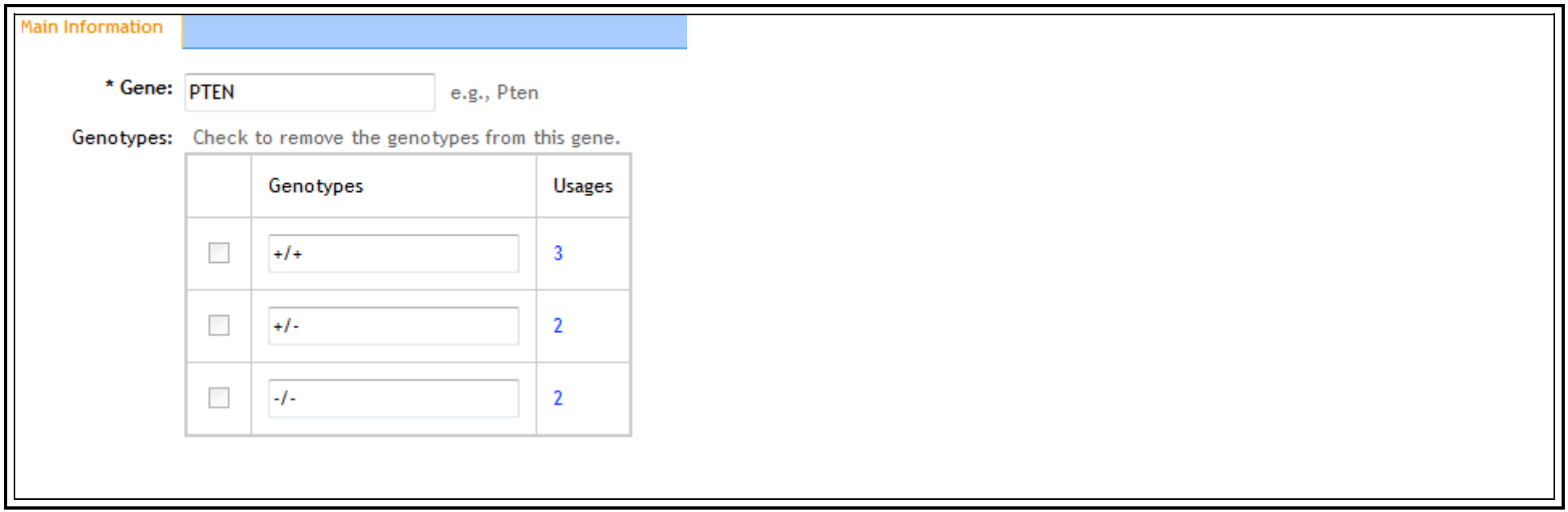
Edit Genes and Genotypes

To edit a gene name or genotype or add more genotypes to a gene, return to the Genes and Genotypes tool and select Update or Edit:



Note: if you edit a gene name or genotype, the change will reflect on all existing records. For example, if you change FGF8 to FGF9, in all existing records FGF8 will be changed to FGF9.

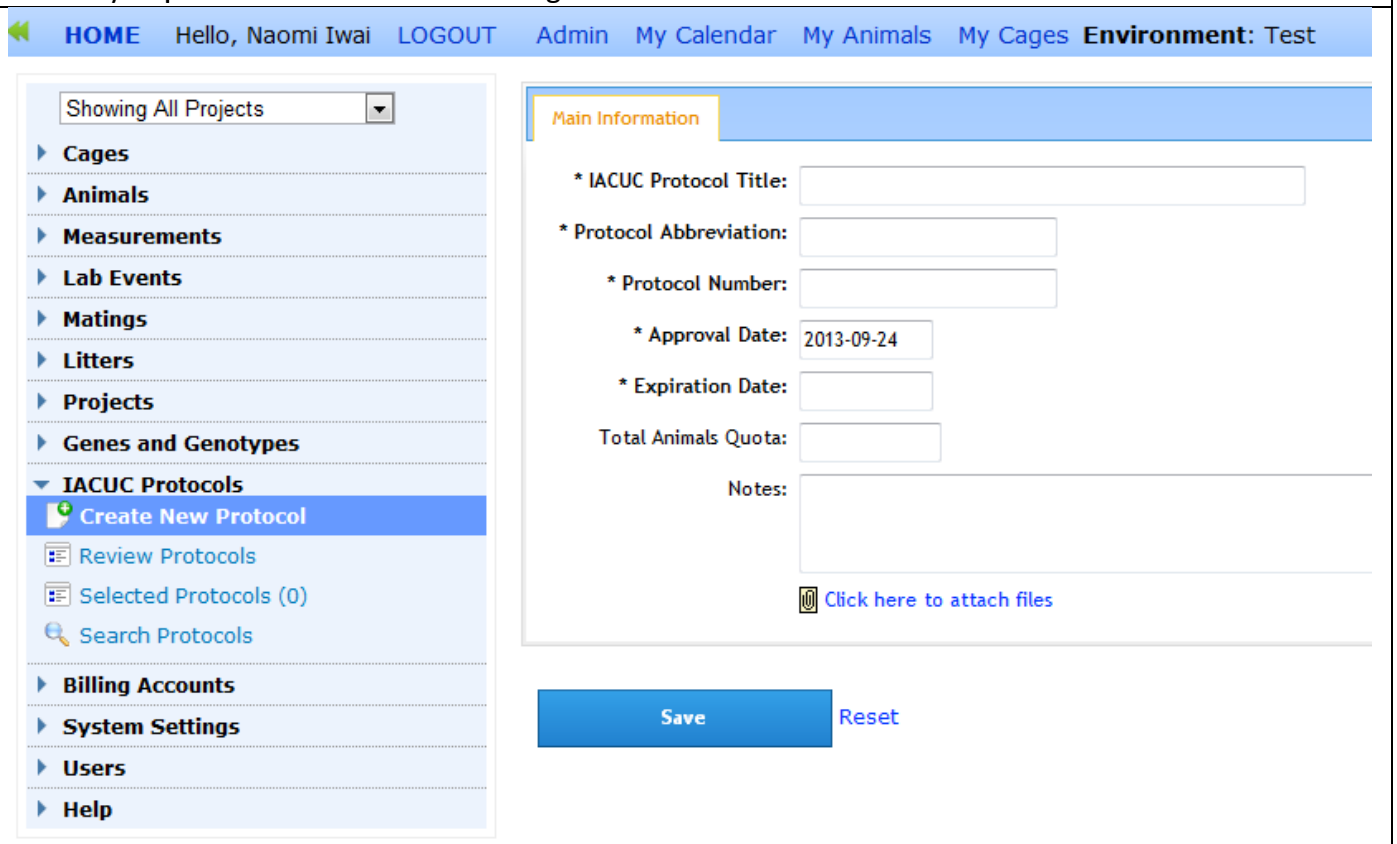
Note: you can remove a genotype from a gene only if that genotype has not been used yet. Once a genotype has been used in an existing record (see below), the genotype cannot be removed (you will not be able to check the Remove check box.)

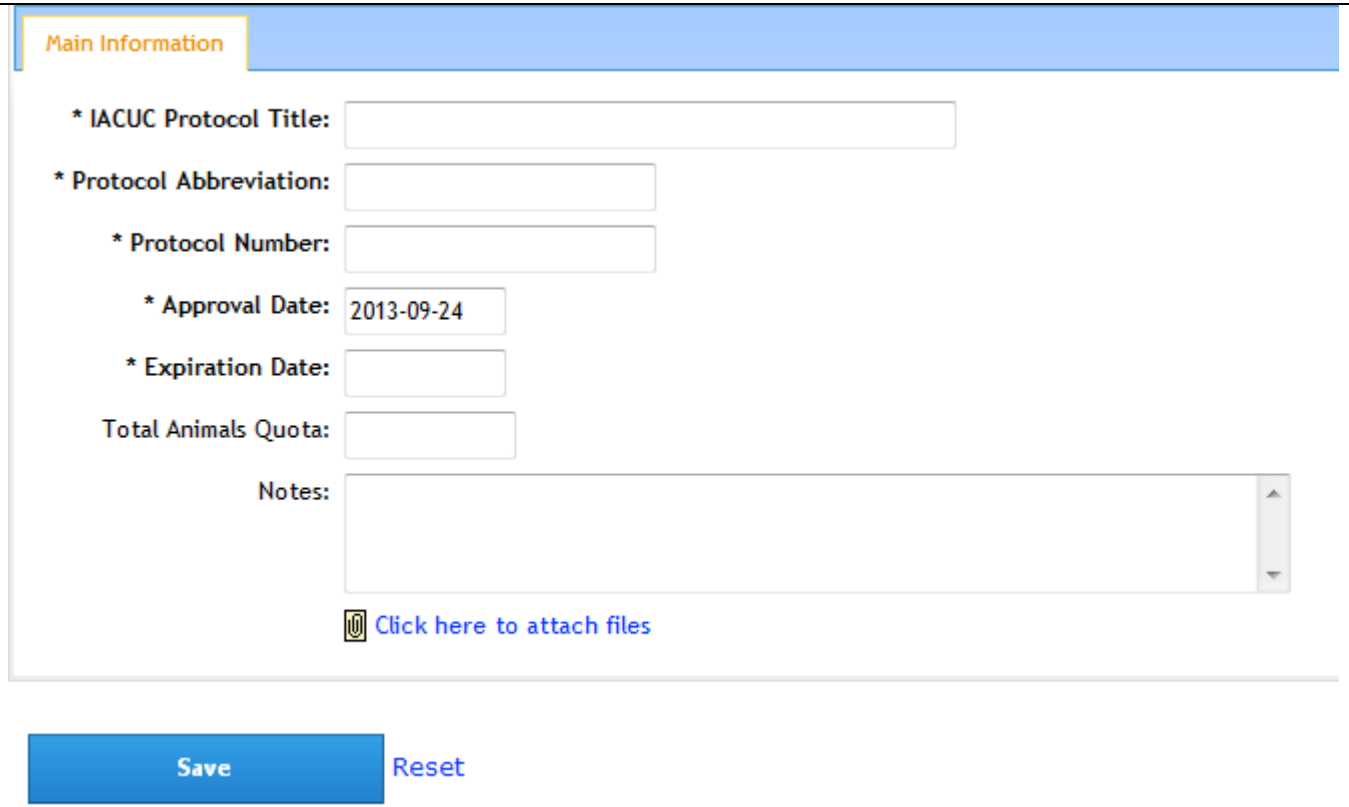

Main Information
* Gene:
PTEN
e.g., Pten
Genotypes:
Check to remove the genotypes from this gene.
Genotypes
Usages
+/+
3
+/-
2
-/-
2

Create IACUC Protocol

The entry of IACUC Protocols is mandatory in mLIMS. Please consult with your PI or manager and obtain accurate information about your protocol before starting. It is highly recommended that permission to the IACUC Protocols tool is restricted to the lab mLIMS manager only. The lab mLIMS manager should be responsible for accurate entry of protocol information including renewals.

1. **In left hand menu, select IACUC Protocols > Create New Protocol**



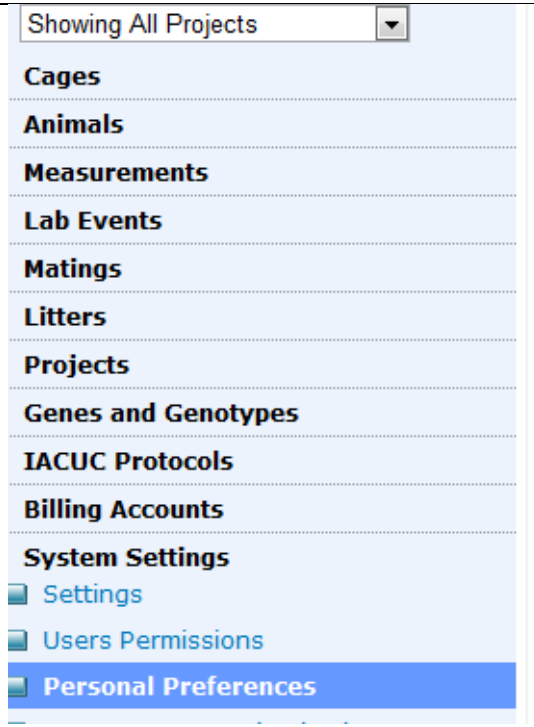
2. Enter all mandatory information and click Save Note: Protocol Abbreviation is an abbreviation that you choose to distinguish a protocol, as protocol titles can be very long. Throughout the system, protocols will be displayed as 'protocol abbreviation + protocol number'. For more information about IACUC Protocols, refer to Section 9 IACUC Protocols	

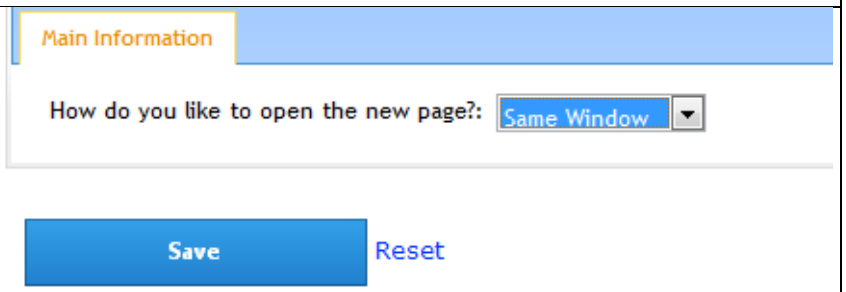
Section 3Setting Up Your Personal Preferences

Personal Preferences

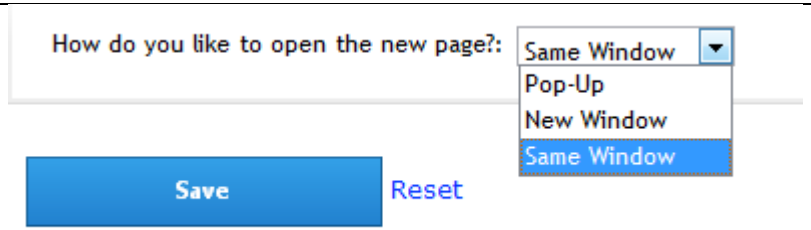
You can decide how you want to open a window or tab.

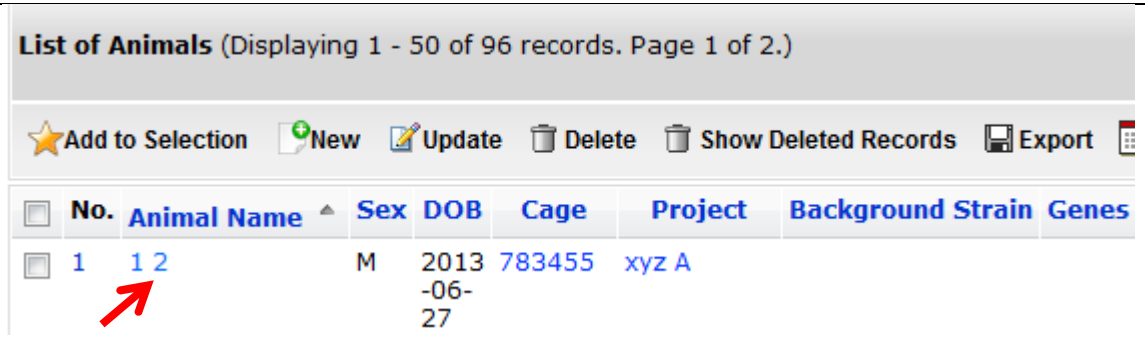
1. **In left hand menu, select System Settings > Personal Preferences**

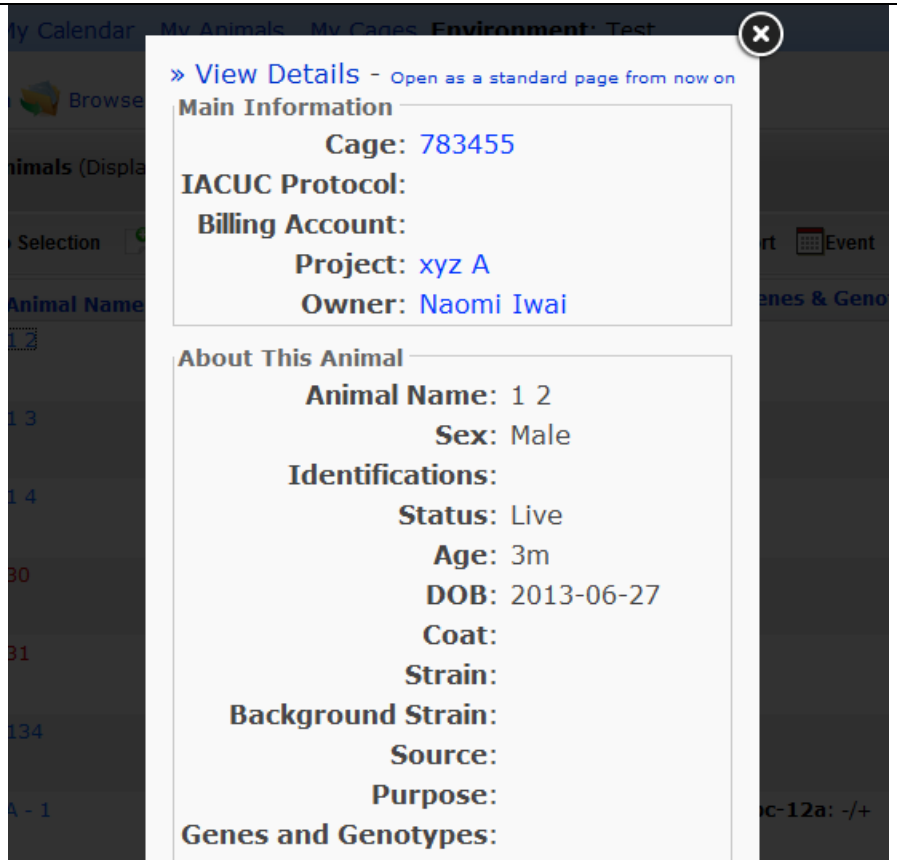




2. **How do you like to open the new page?**



If you choose **Pop-Up**, each time you click on a record, a pop up window will display (see screenshot at right). If you choose **New Window**, the information will display as a new window (or new tab depending on your browser settings). If you choose **Same Window**, the information will display in the same window.	



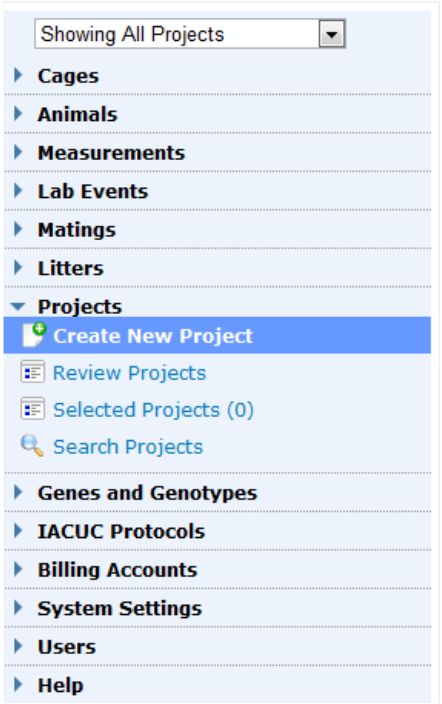
3. **Select your preferred option and click Save**

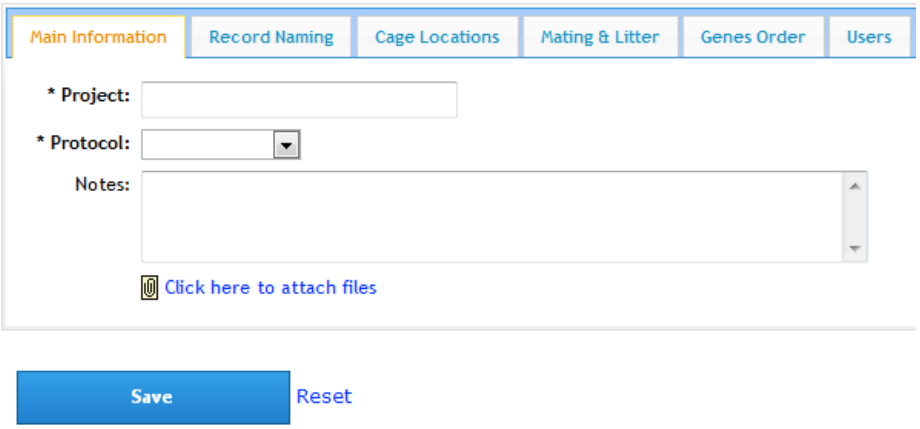
Section 4Setting Up Your Projects

Create Project

It is important that you create a Project before you start entering data. A Project is a group of animals and cages and related information. Users can create multiple Projects based on how they want to categorize their animals/cages (e.g. per research project, per mouse strain). Always create a Project first, then create animals/cages under the Project.

1. **In left hand menu, select Projects > Create New Project**





2. **Enter Project name**
3. **Select a default protocol for this Project**

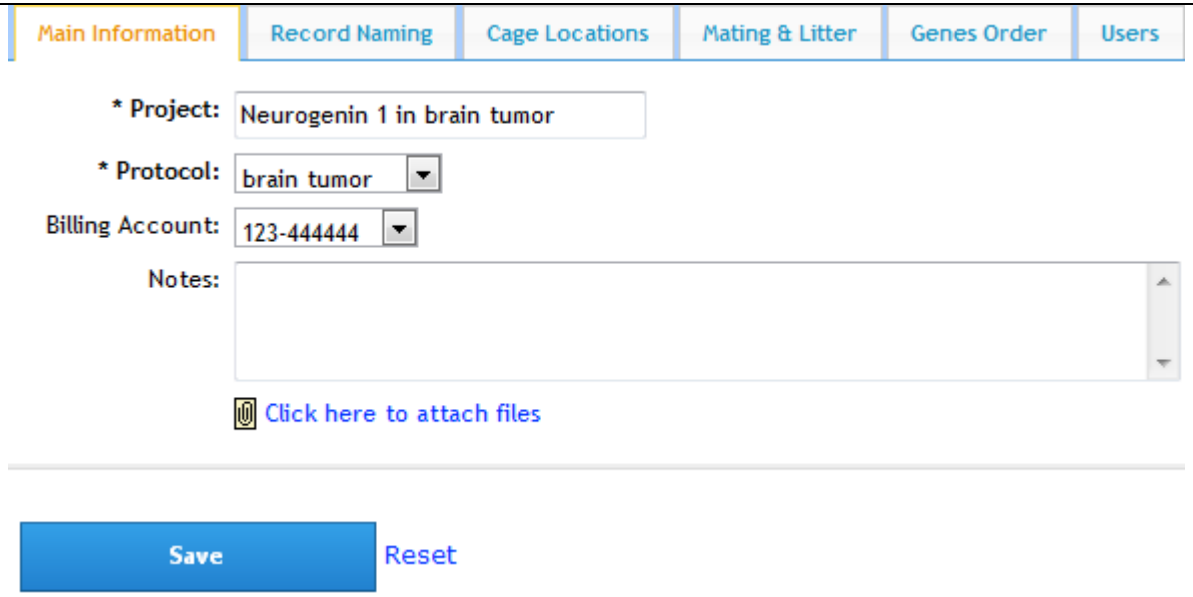
Animals and cages that you create in this Project will by default have this protocol number.

4. **Select a default billing account for this Project**

Animals and cages that you create in this Project will by default have this billing account.

Note: You will not see this field if you have not created a Billing Account.

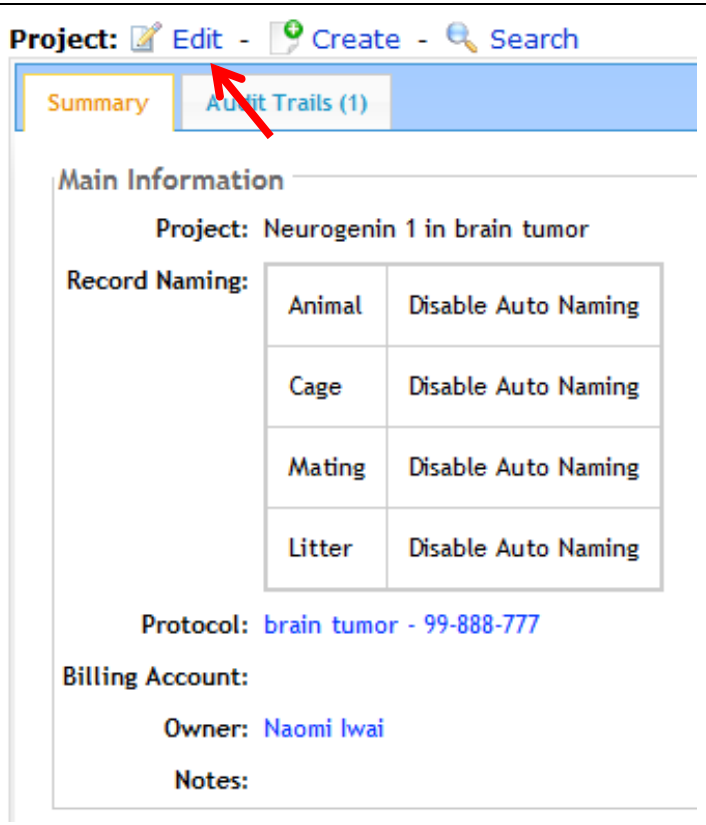
5. **Click Save**



Tip: keep your Project name short as it will appear in the Projects selection menu:

If you have long Project names, the Projects selection menu will become wide, leaving less space on the right for the main work area.

6. **Your Project has been created**
7. **Click on Edit button**



8. **Select 'Record Naming' tab and set up your preferred record naming rules**

You can decide how you want to name your records in this Project.

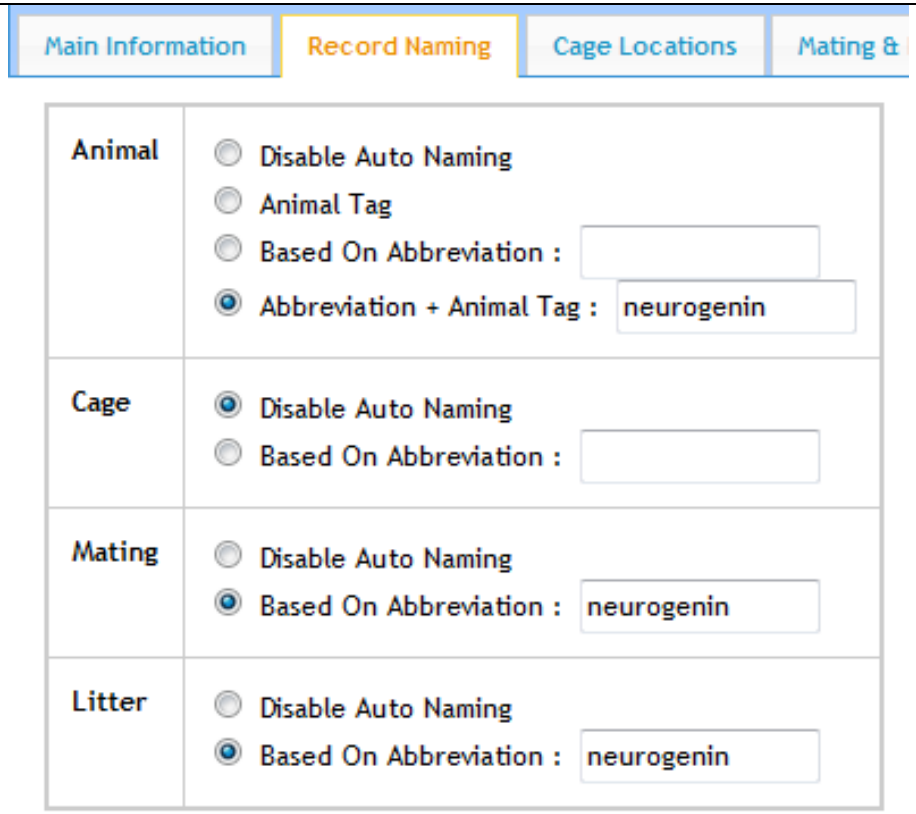
Disable Auto Naming: system will not auto-name your record (name field will be blank and you will type the name)

Based on Abbreviation: enter your desired abbreviation. The system will use this abbreviation plus a system-generated number to create a name.
Tip: keep your abbreviations short

For Animals only:

Animal Tag: system will name your animals with the animal tag number (e.g. ear punch, toe clip)

Abbreviation + Animal Tag: system will name your animals with your abbreviation plus animal tag number

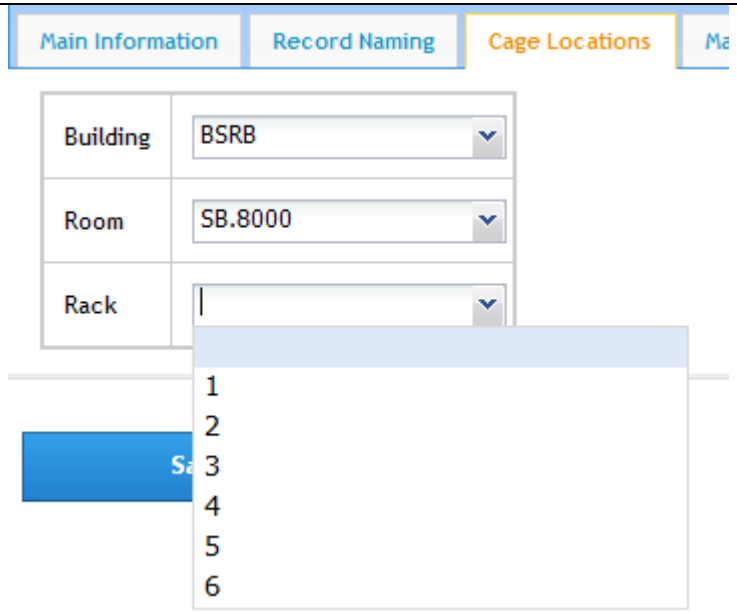


9. Cage Locations tab:

Set up your default cage location in this Project.

You will be able to choose from a drop down menu which was set up in Settings > Drop Down List by your lab mLIMS manager.

If you don't have a specific location, e.g. your mice are on several different racks, leave the field blank.



10. Mating & Litter tab:

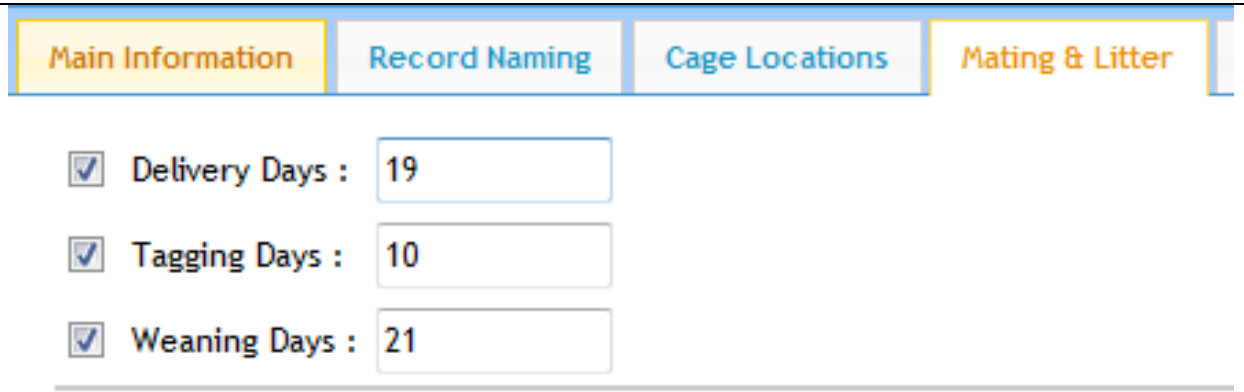
Set up your default number of Delivery Days, Tagging Days and Weaning Days for this Project.

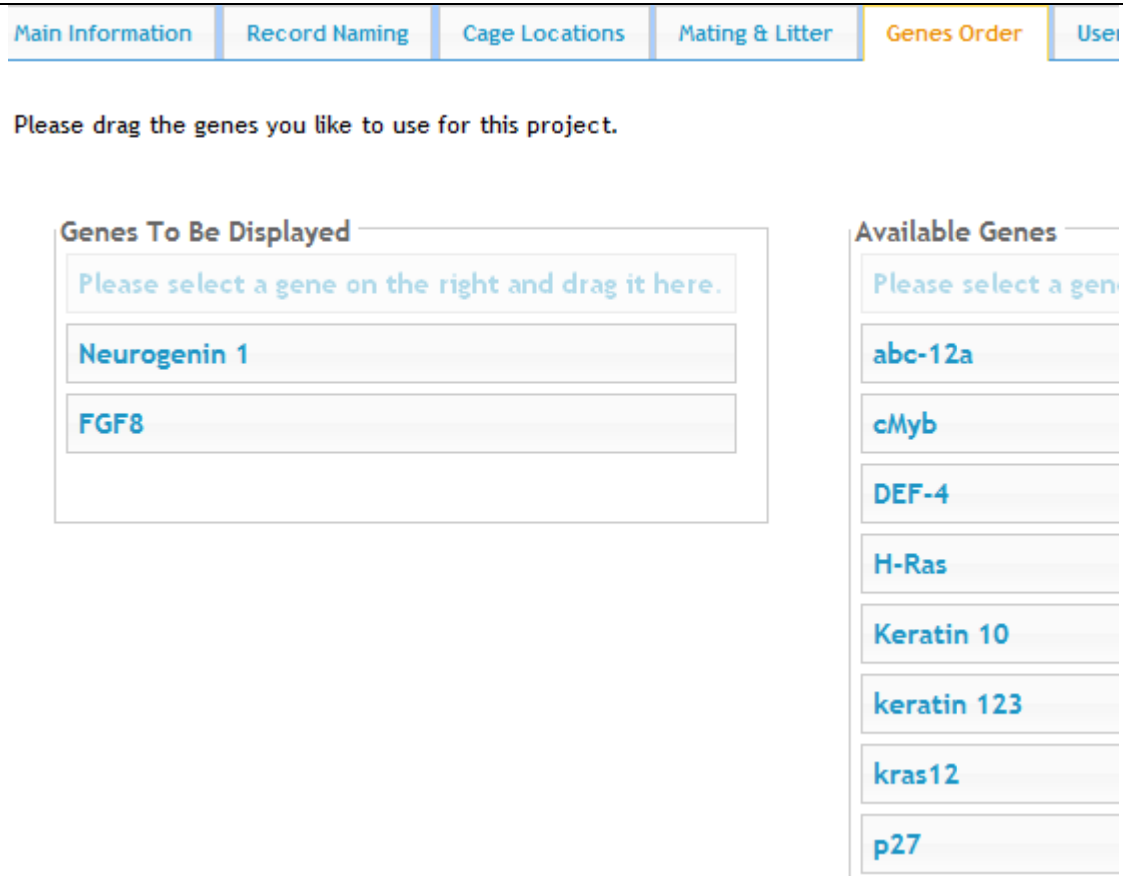
Delivery Days: number of days from plug date to scheduled delivery date

Tagging Days: number of days from DOB to tagging

Weaning: number of days from DOB to weaning

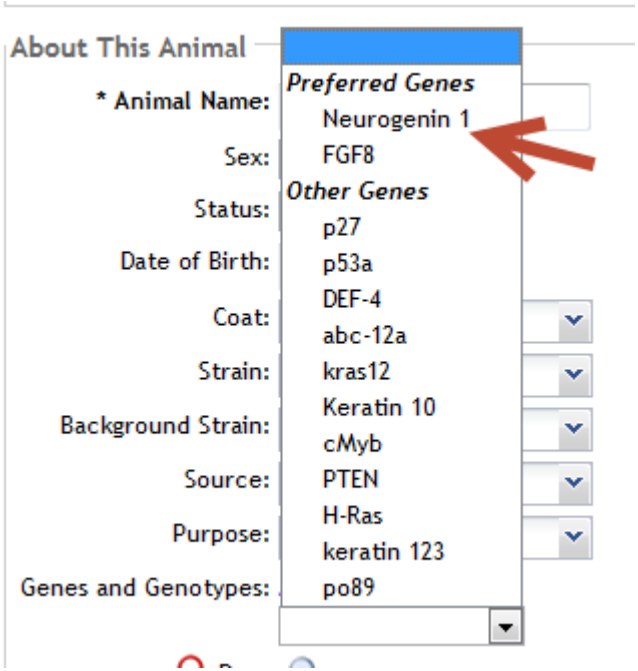
The system will create email reminders for delivery, tagging, weaning based on the number of days set up here. If you do not want email reminders, you can leave these fields



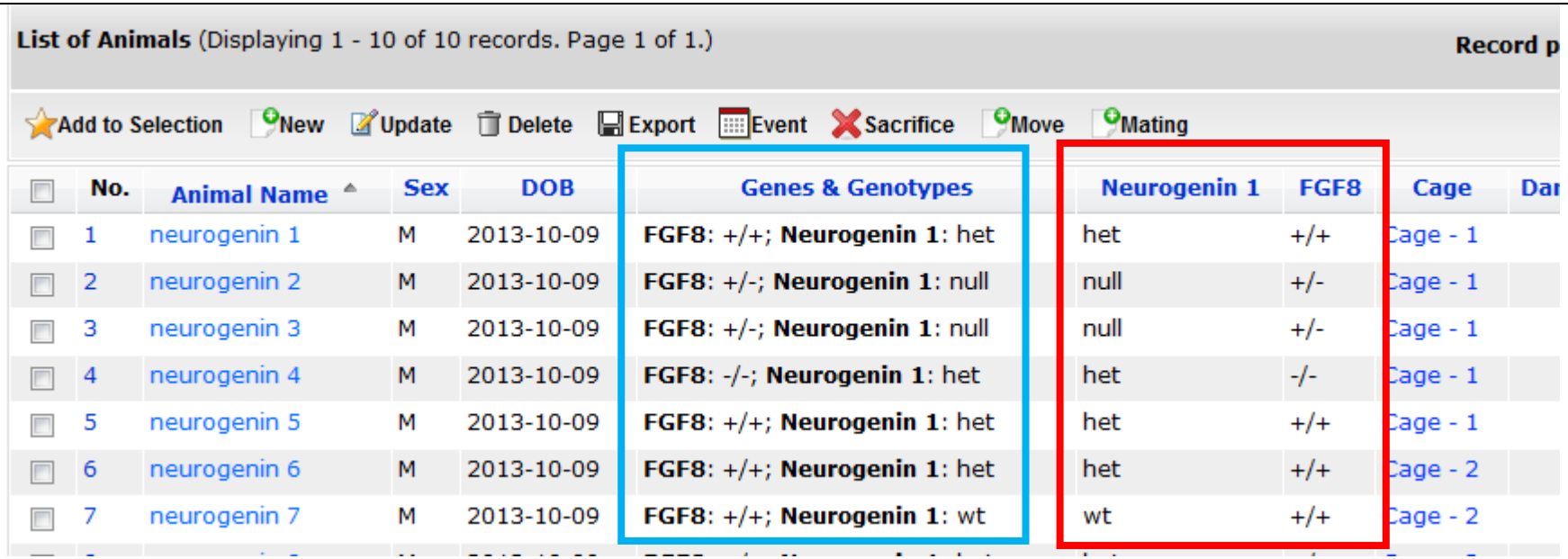
blank. Even if you want email reminders, you do not have to set up the number of days here; you can do so when you create a mating or litter (for more information, refer to Section 7 Matings and Litters). Note: Tagging and Weaning are set up as a pair; you have to enter both days for the email reminders to work.	
11. Genes Order Tab: **If there are genes that you will use frequently in this Project, drag-drop them to the left.**	

In the example above, Neurogenin 1 and FGF8 are the preferred genes in this Project. Two things will happen:

a. In Add New Animal window >Genes and Genotypes field, the preferred genes are displayed on top of the dropdown menu:



b. In Review Animals > List of Animals, you can display the preferred genes as column header:


List of Animals (Displaying 1 - 10 of 10 records. Page 1 of 1.)
Record p
Add to Selection
New
Update
Delete
Export
Event
Sacrifice
Move
Mating
No.
Animal Name
Sex
DOB
Genes & Genotypes
Neurogenin 1
FGF8
Cage
1 neurogenin 1 M 2013-10-09 FGF8: +/+; Neurogenin 1: het het +/+ Cage - 1
2 neurogenin 2 M 2013-10-09 FGF8: +/-; Neurogenin 1: null null +/- Cage - 1
3 neurogenin 3 M 2013-10-09 FGF8: +/-; Neurogenin 1: null null +/- Cage - 1
4 neurogenin 4 M 2013-10-09 FGF8: -/-; Neurogenin 1: het het -/- Cage - 1
5 neurogenin 5 M 2013-10-09 FGF8: +/+; Neurogenin 1: het het +/+ Cage - 1
6 neurogenin 6 M 2013-10-09 FGF8: +/+; Neurogenin 1: het het +/+ Cage - 2
7 neurogenin 7 M 2013-10-09 FGF8: +/+; Neurogenin 1: wt wt +/+ Cage - 2

You will have the option to display gene name as column header and genotype as value (see above red box), in addition to the default display of genes and genotypes (see above blue box).

For how to set up which columns you want to see and in which order, see Section 5 Animals > Set Up Column View.

12. Users Tab:

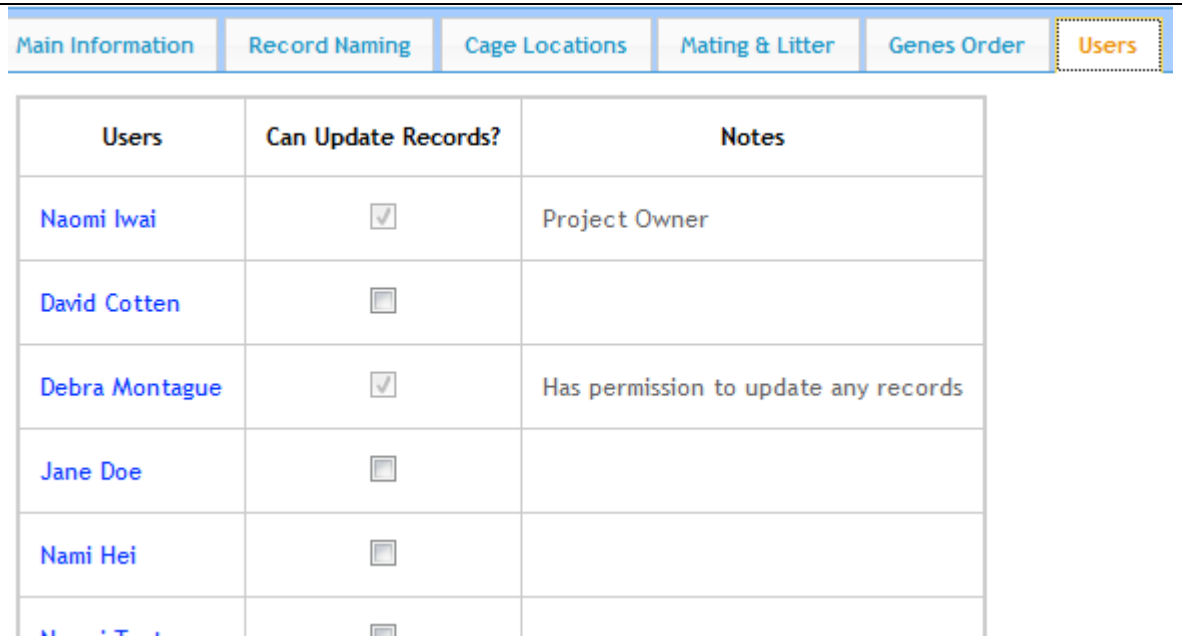
You can give other users in your lab edit access to your Project by checking the check box under Can Update Records?

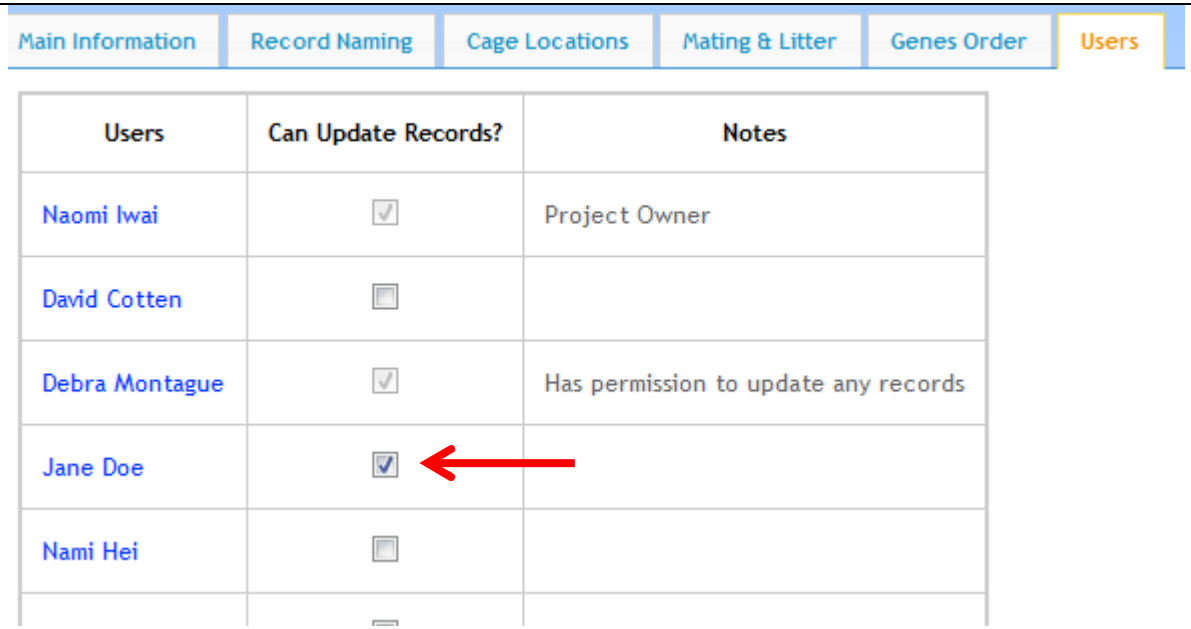
In this example, Naomi can update records in this Project because she is the Project Owner.

Debra can also update records in this Project because she has Update Other Researchers' Records permission in Users Permissions (see Section 2, Manage User Permissions).

But if you want additional users to be able to update records in this Project, check the check box for the users. In this example, Jane Doe has been given edit access.

To disable edit access, simply uncheck the check box.

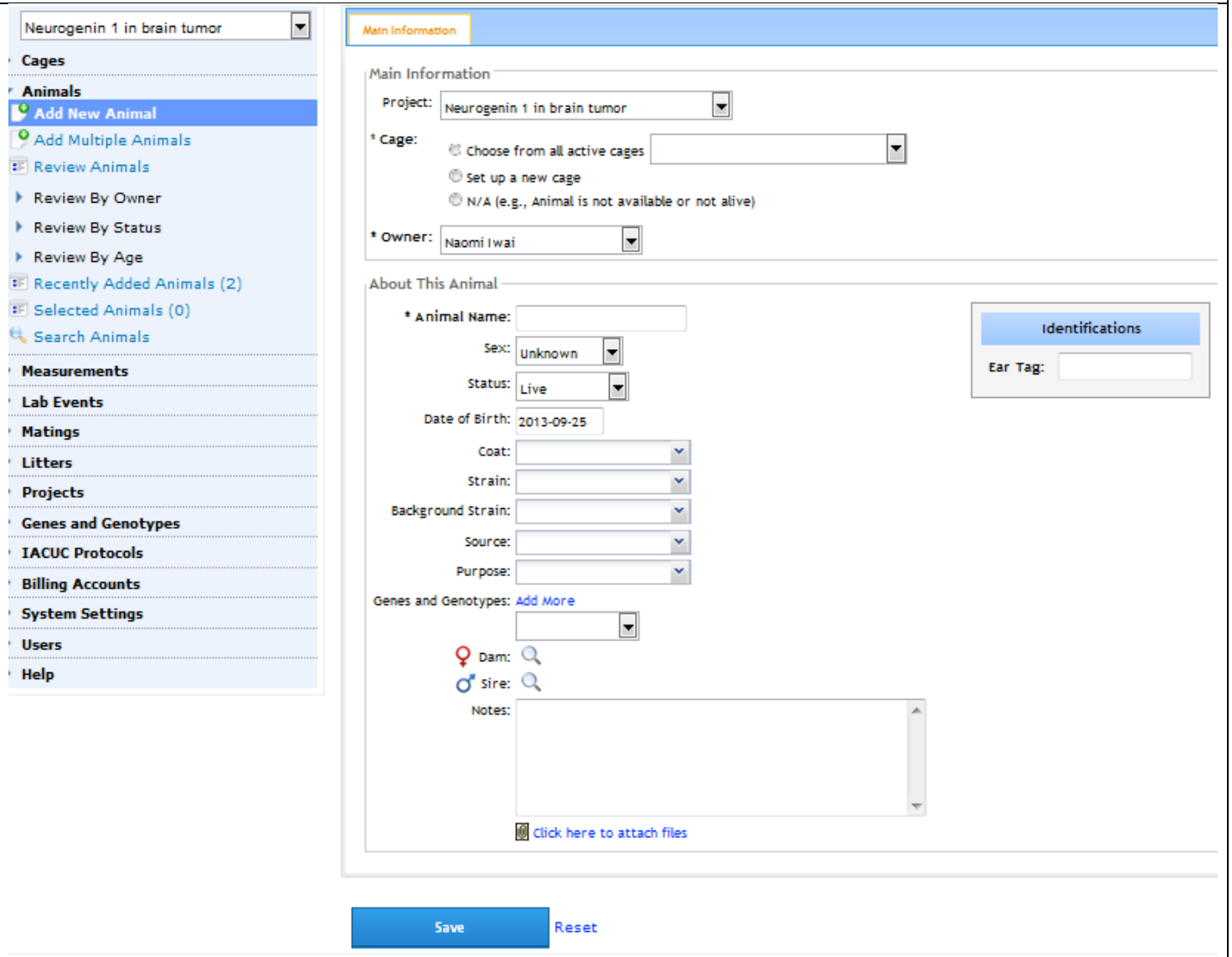




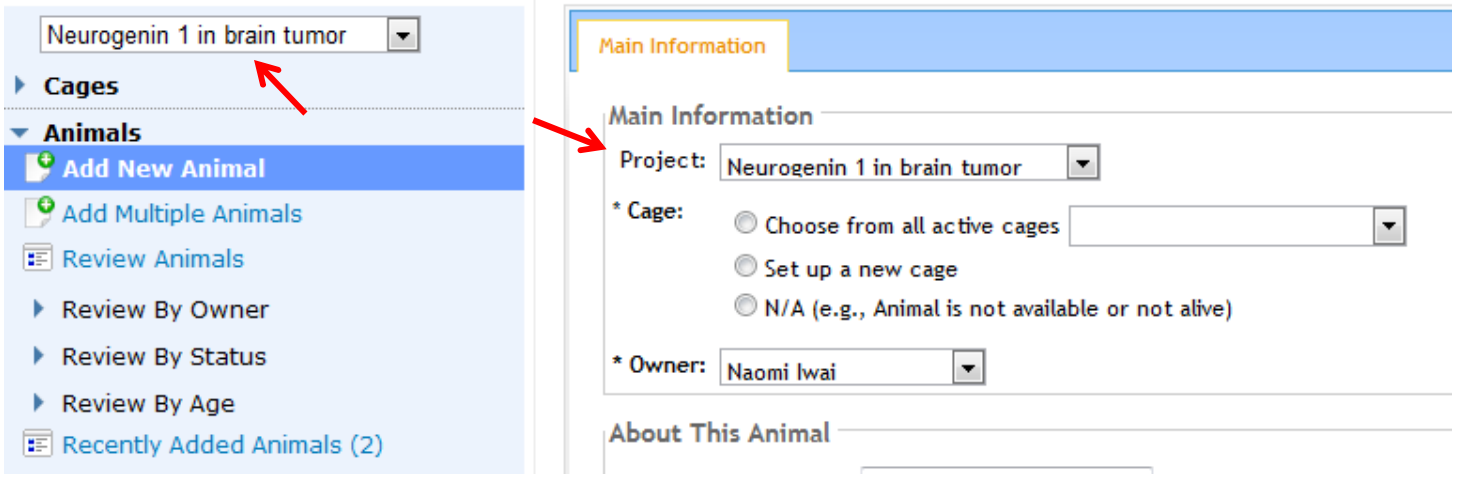
Section 5 Animals

Add New Animal

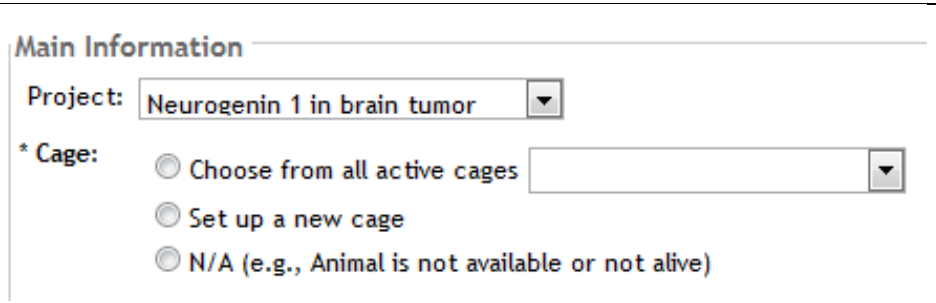
1. **In left hand menu, select Animals > Add New Animal**



2. **Select Project** (you can select in either left hand menu Projects selection list or main information window Project field)

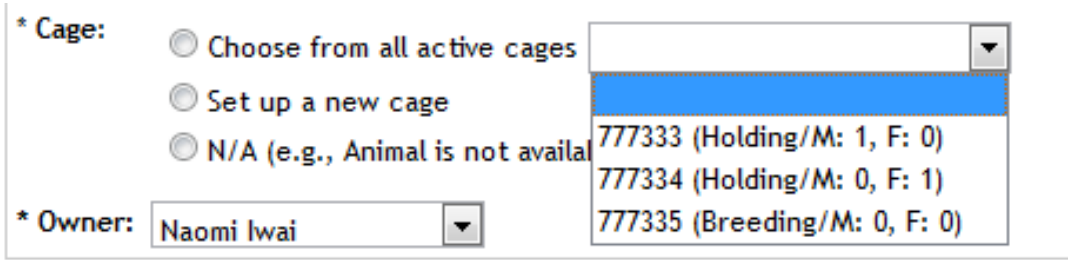


3. **Set up a cage for the animal**


Main Information
Project: Neurogenin 1 in brain tumor
* Cage:
Choose from all active cages
Set up a new cage
N/A (e.g., Animal is not available or not alive)

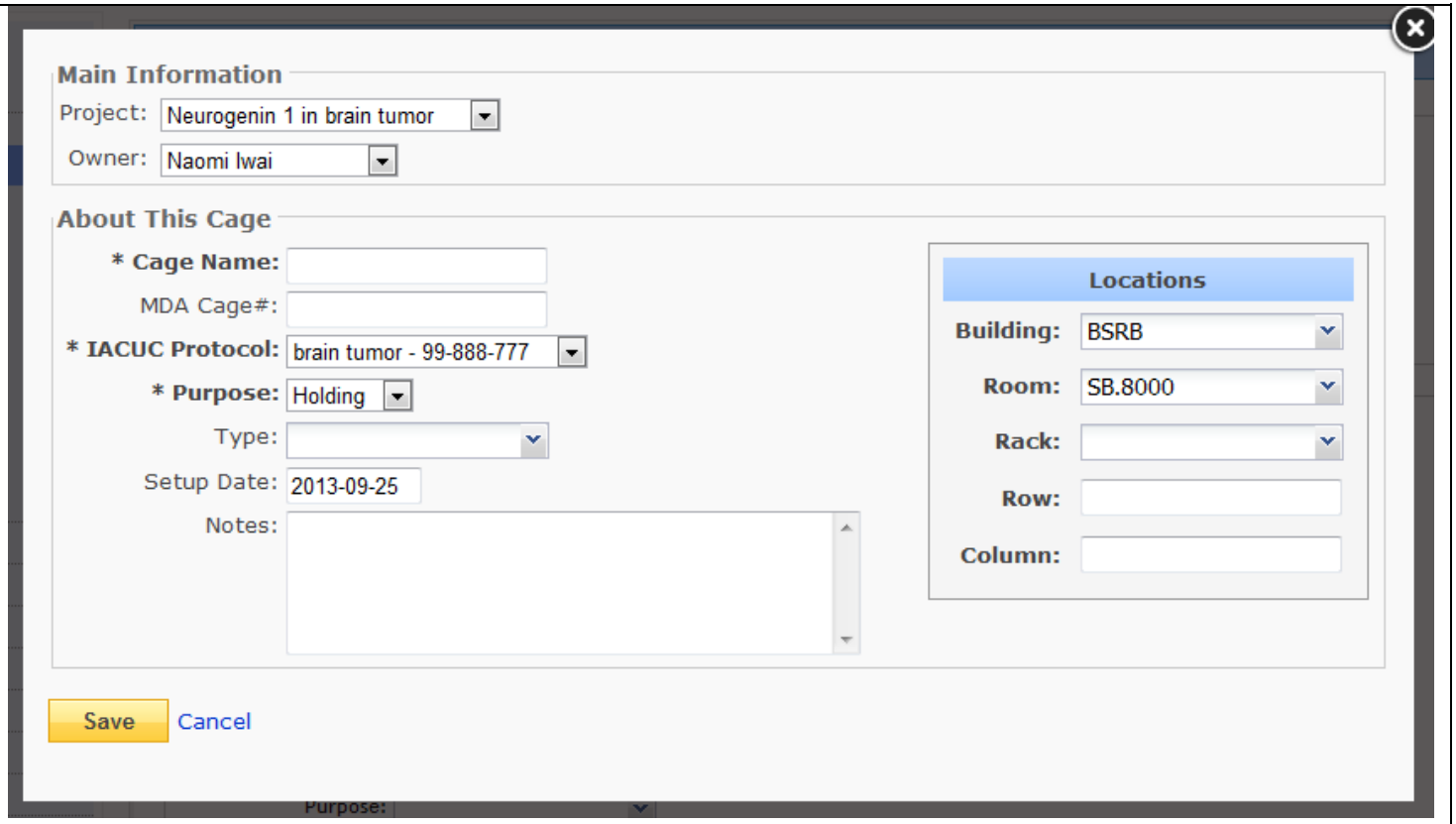
You have three options:

Choose from an existing cage: the drop down menu displays all active cages in the Project. Cage name, Cage Purpose (Holding or Breeding), and number of Males and Females in the cage are displayed.


* Cage:
Choose from all active cages
Set up a new cage
N/A (e.g., Animal is not availal
777333 (Holding/M: 1, F: 0)
777334 (Holding/M: 0, F: 1)
777335 (Breeding/M: 0, F: 0)
* Owner: Naomi Iwai

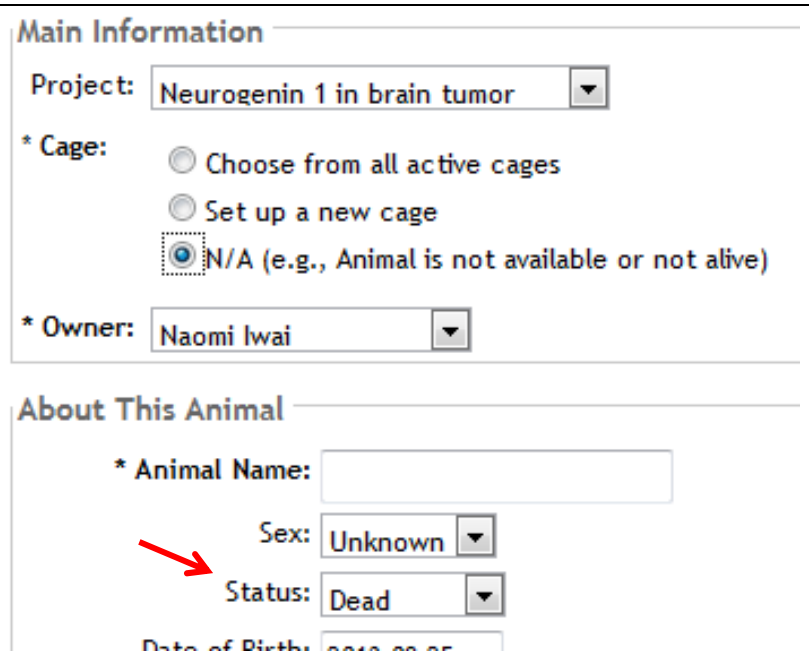
Set up a new cage:

When you click on this option, a Create Cage window displays. Enter all mandatory information and click on Save. Note that some values such as IACUC Protocol and cage Locations have already been prepopulated based on your Project default settings. You can change these values.



N/A (e.g. Animal is not available or not alive):

You can choose this option of not selecting a cage if your animal is not available in the colony or not alive. Note that the animal Status field will

automatically change to Dead.	

4. Enter Animal Information and click Save

Animal Name is mandatory, remaining fields are all optional.

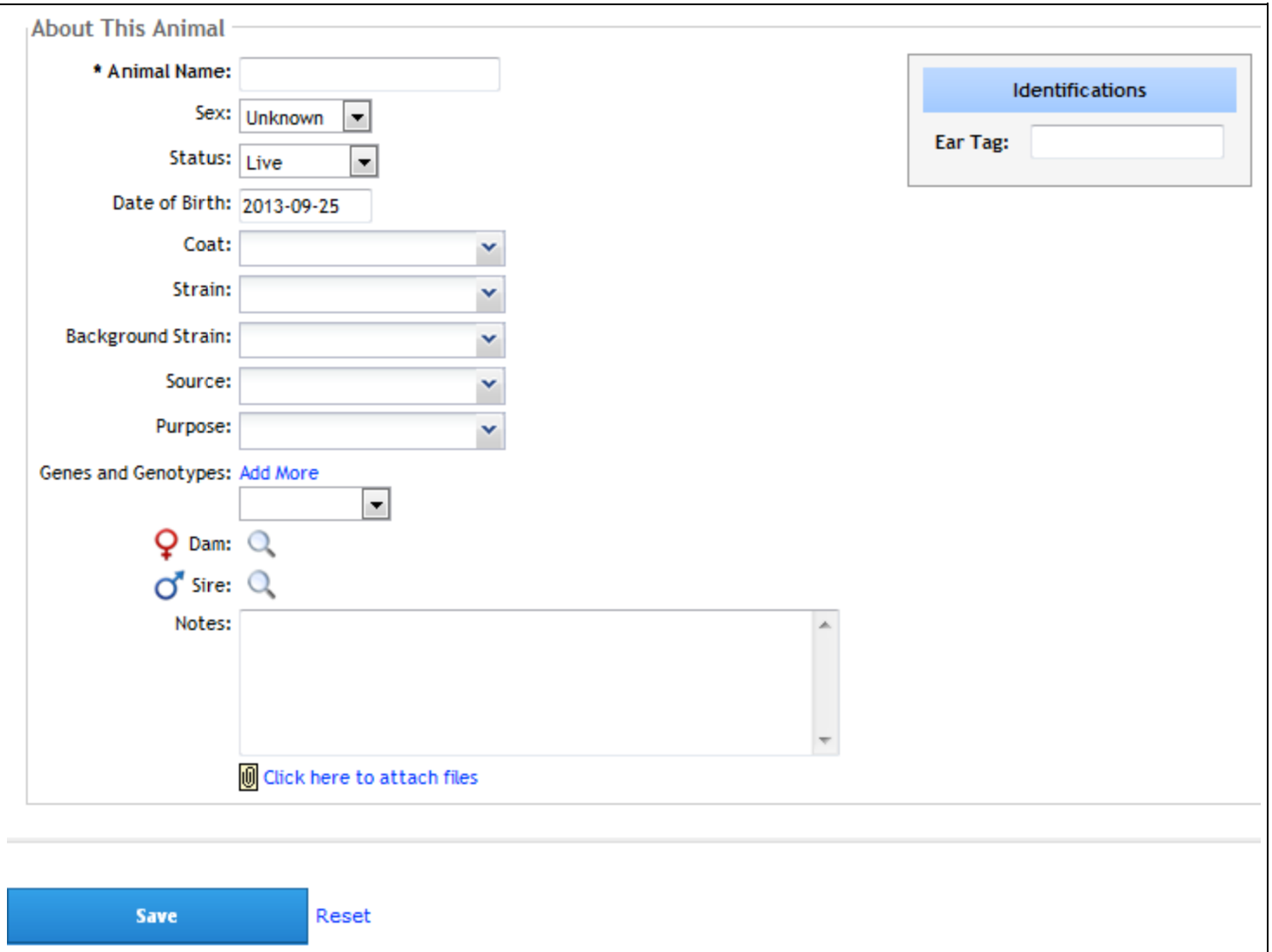
Note: if you chose an auto-naming rule for animal names in your Project settings, animal name will be created accordingly.

Coat, Strain, Background Strain, Source, Purpose are all drop down menus which have been set up in Settings by the lab mLIMS manager.

Genes and Genotypes can be selected from a list set up in Genes and Genotypes by the lab mLIMS manager.

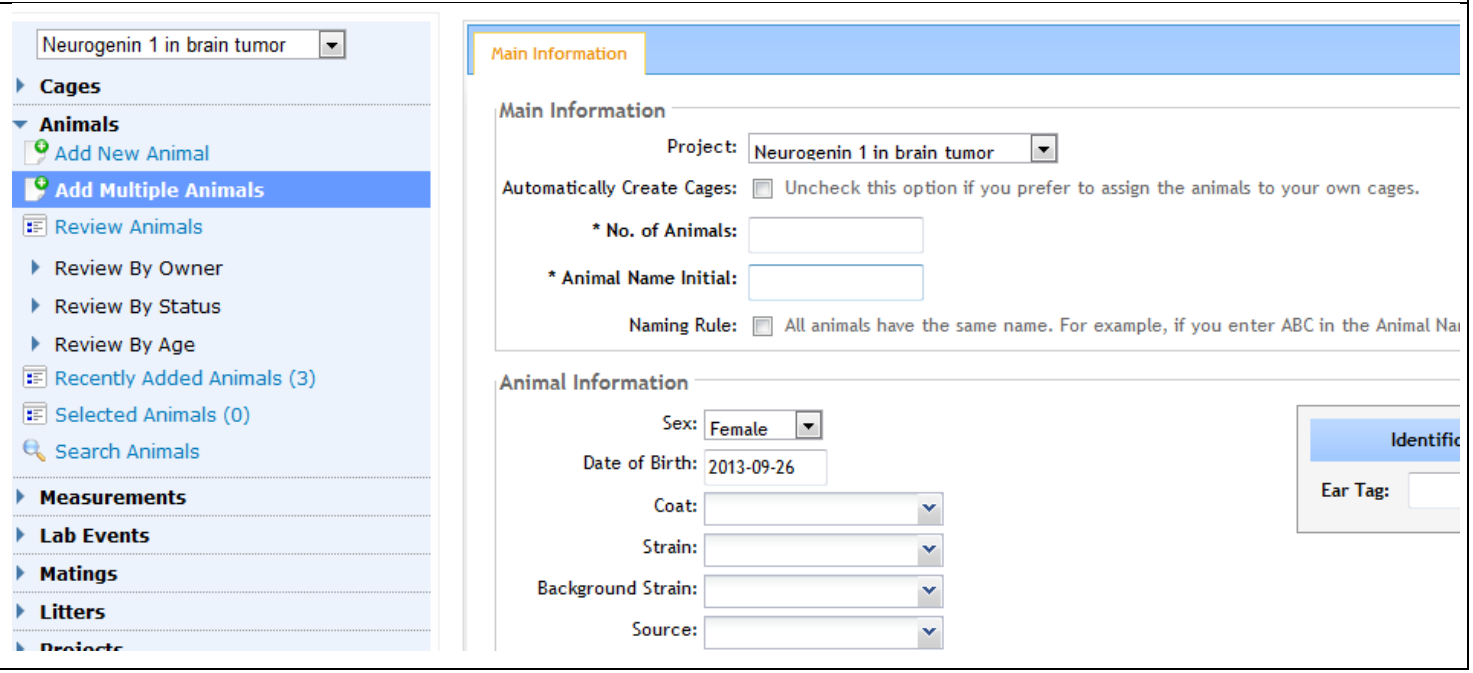
You can enter the dam and sire (mother and father of the animal) by selecting them from the magnifying glass icon list.

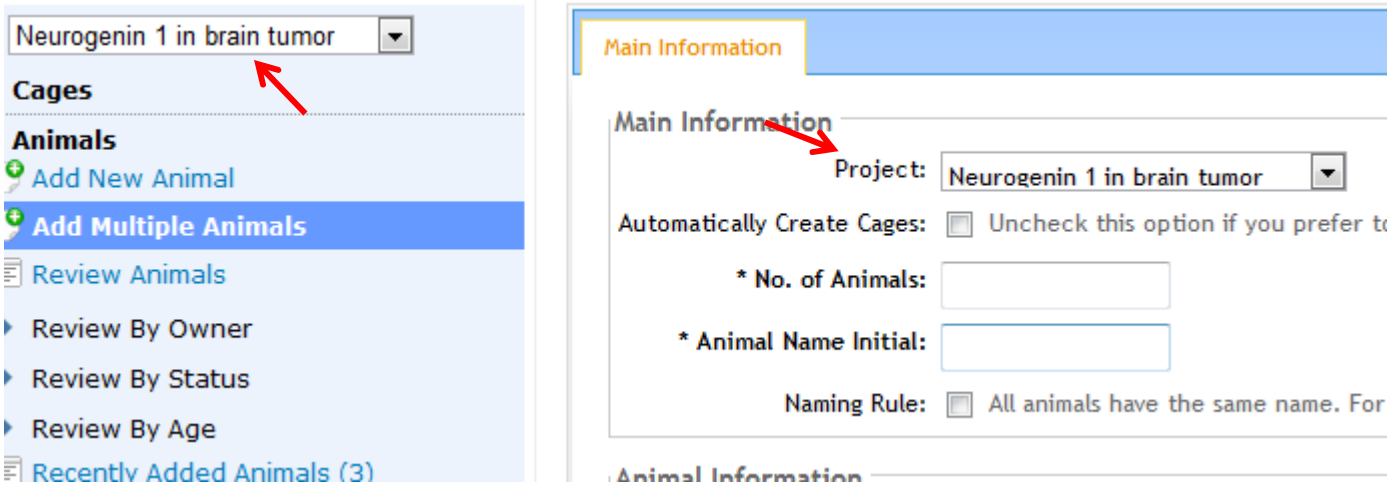
Click on 'Click here to attach files' to attach a file to this animal record.



Add Multiple Animals

1. **In left hand menu, select Animals > Add Multiple Animals**

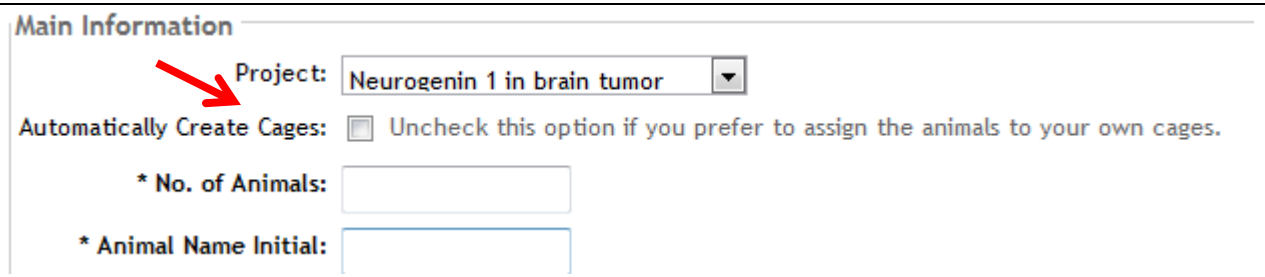


2. Select Project (you can select in either left hand menu Projects selection list or main information window Project field)	

3. **Choose if you want the system to automatically create cages or if you want to create cages later**

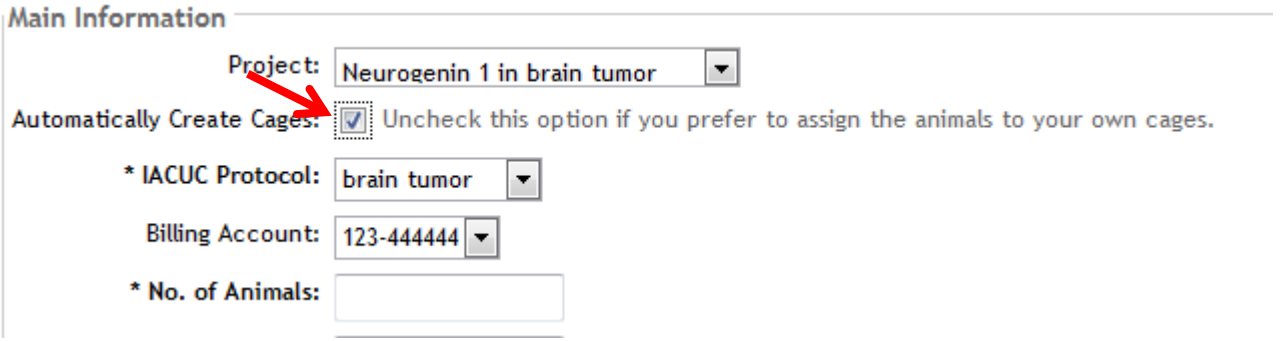
If you want the system to create cages, check the check box 'Automatically Create Cages'. The system will create cages and distribute your animals in these cages.

If you want to later assign them in cages, leave the check box unchecked.


Main Information
Project:
Neurogenin 1 in brain tumor
Automatically Create Cages:
Uncheck this option if you prefer to assign the animals to your own cages.
* No. of Animals:
* Animal Name Initial:

In this example, we will automatically create cages:

4. **Check the check box**
5. **Note that IACUC Protocol and Billing Account fields appear**



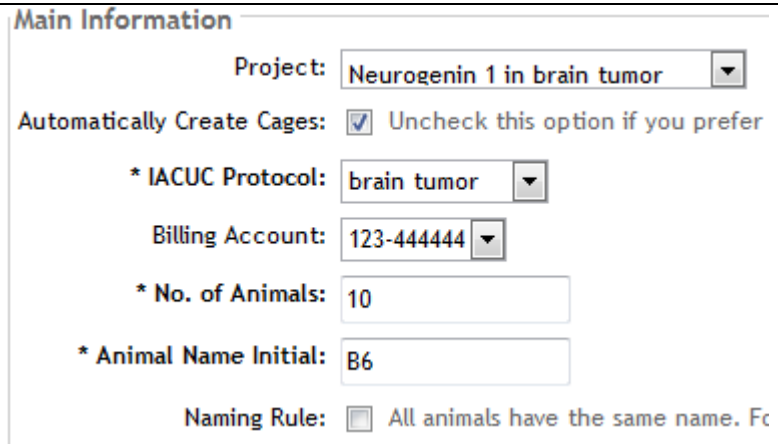
The cages will have this protocol and billing account. You can change these by selecting a different protocol or account from the drop down menu.

Note: you will not see the Billing Account field if no billing account has been created.

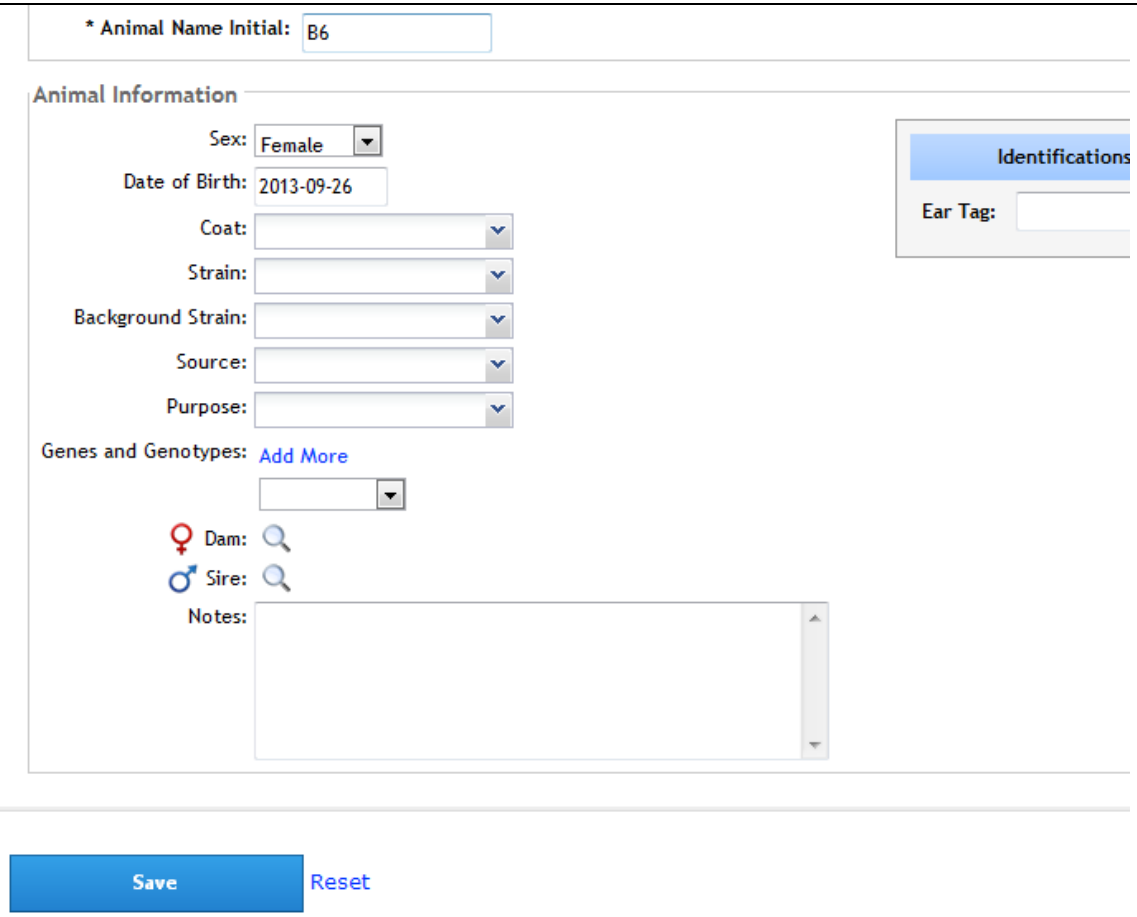
6. **Enter No. of Animals and Animal Name Initial**
7. **Select Naming Rule: if you check this check box, all animals will have the same name. If you leave it unchecked, the system will auto-name the animals (will add numbers behind the initial so that all animals will have different names.)**

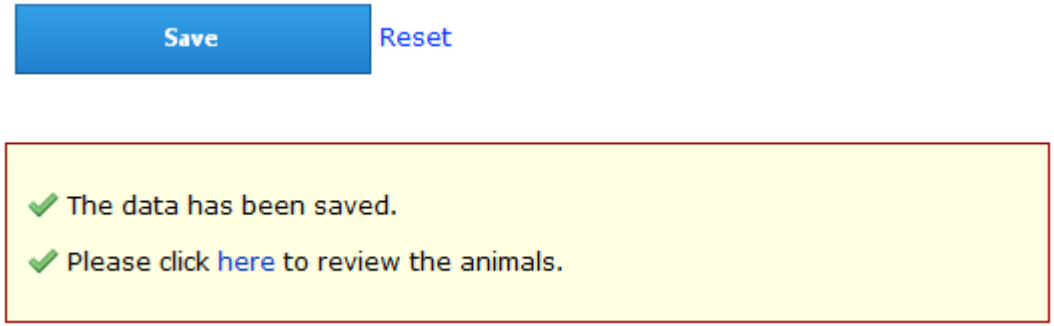
Note: you will not see this Naming Rule field option if you chose No for Allow Duplicated Animal Name?in Settings > Animals tab.

In this example, we will leave this check box unchecked.



8. Enter animal information and click Save



9. A message will appear: the data has been saved. **10. Click on "here" to review the animals.**	

11. You can view the animals that you created.

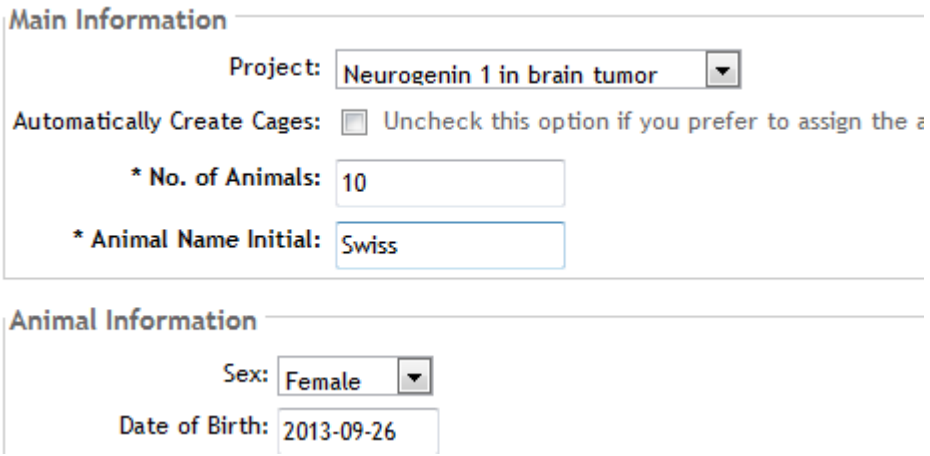
Note that the system has numbered the animals so that the animal names are unique. If you selected the Naming Rule (all animals have the same name), all animals would have been named B6.

Note that new cages have been created automatically (Cage – 1 and Cage – 2) and that animals have been distributed in the cages. You can redistribute the animals however you like by using the Move Animal function (see below).

Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (13)
Selected Animals (0)
Search Animals
Measurements
Lab Events
Matings
Litters
Projects
Genes and Genotypes
IACUC Protocols
Billing Accounts
System Settings
Users
Help
No. Animal Name Sex DOB Cage Background Strain
1 B6 1 F 2013-09-26 Cage - 1
2 B6 2 F 2013-09-26 Cage - 1
3 B6 3 F 2013-09-26 Cage - 1
4 B6 4 F 2013-09-26 Cage - 1
5 B6 5 F 2013-09-26 Cage - 1
6 B6 6 F 2013-09-26 Cage - 2
7 B6 7 F 2013-09-26 Cage - 2
8 B6 8 F 2013-09-26 Cage - 2
9 B6 9 F 2013-09-26 Cage - 2
10 B6 10 F 2013-09- Cage - 2

If in above step 3 you chose to not automatically create cages:

Leave check box Automatically Create Cages unchecked

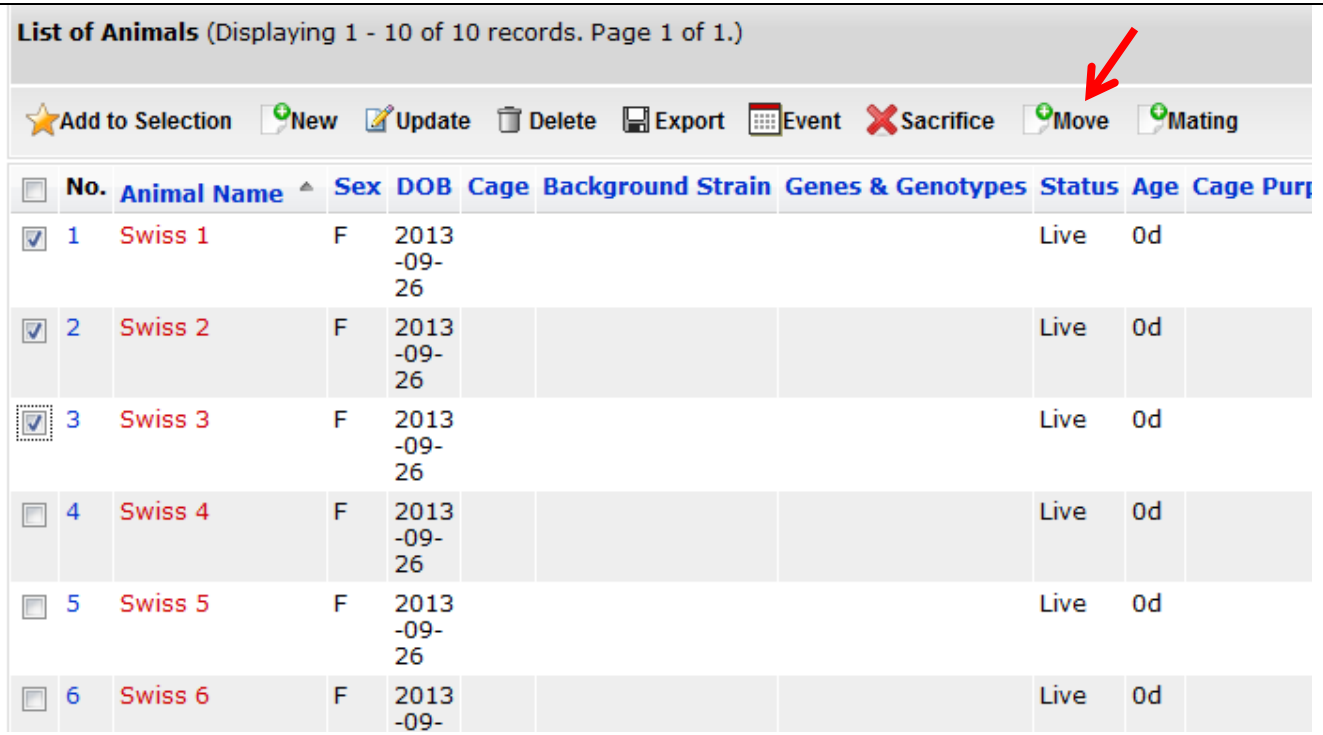

Main Information
Project: Neurogenin 1 in brain tumor
Automatically Create Cages: Uncheck this option if you prefer to assign the a
* No. of Animals: 10
* Animal Name Initial: Swiss
Animal Information
Sex: Female
Date of Birth: 2013-09-26

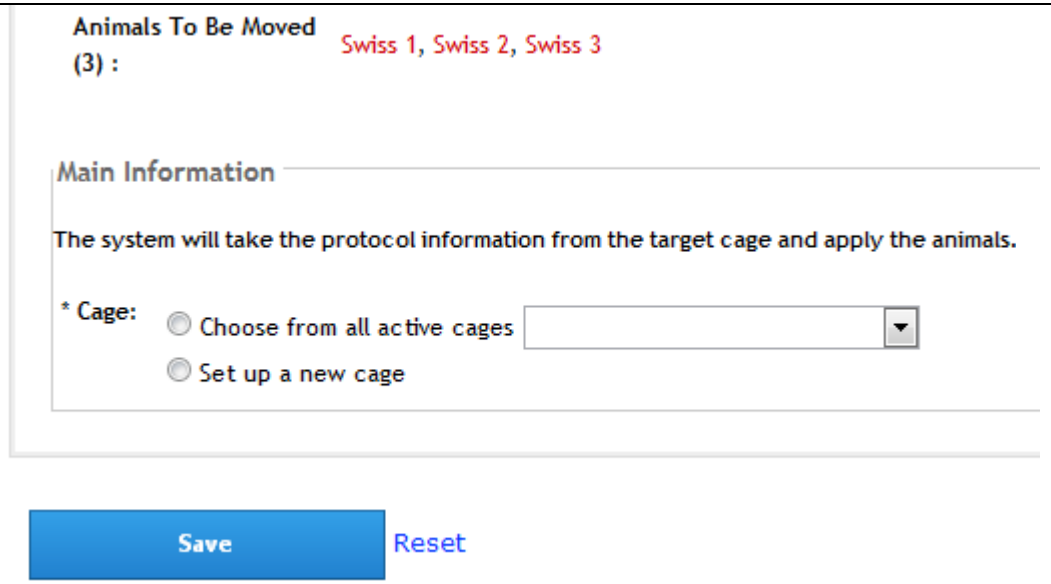
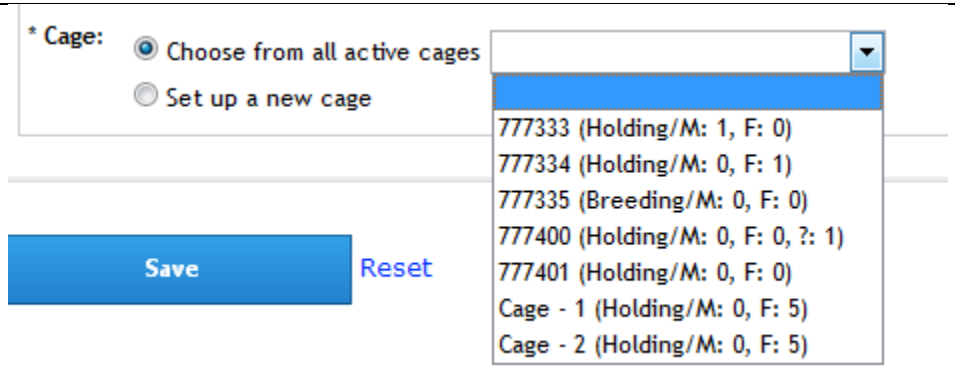
Note that the newly created animals are not in cages (uncaged animals)

No.	Animal Name	Sex	DOB	Cage	Background Strai
1	Swiss 1	F	2013-09-26		
2	Swiss 2	F	2013-09-26		
3	Swiss 3	F	2013-09-26		
4	Swiss 4	F	2013-09-26		
5	Swiss 5	F	2013-09-26		
6	Swiss 6	F	2013-09-26		
7	Swiss 7	F	2013-09-26		
8	Swiss 8	F	2013-09-26		
9	Swiss 9	F	2013		

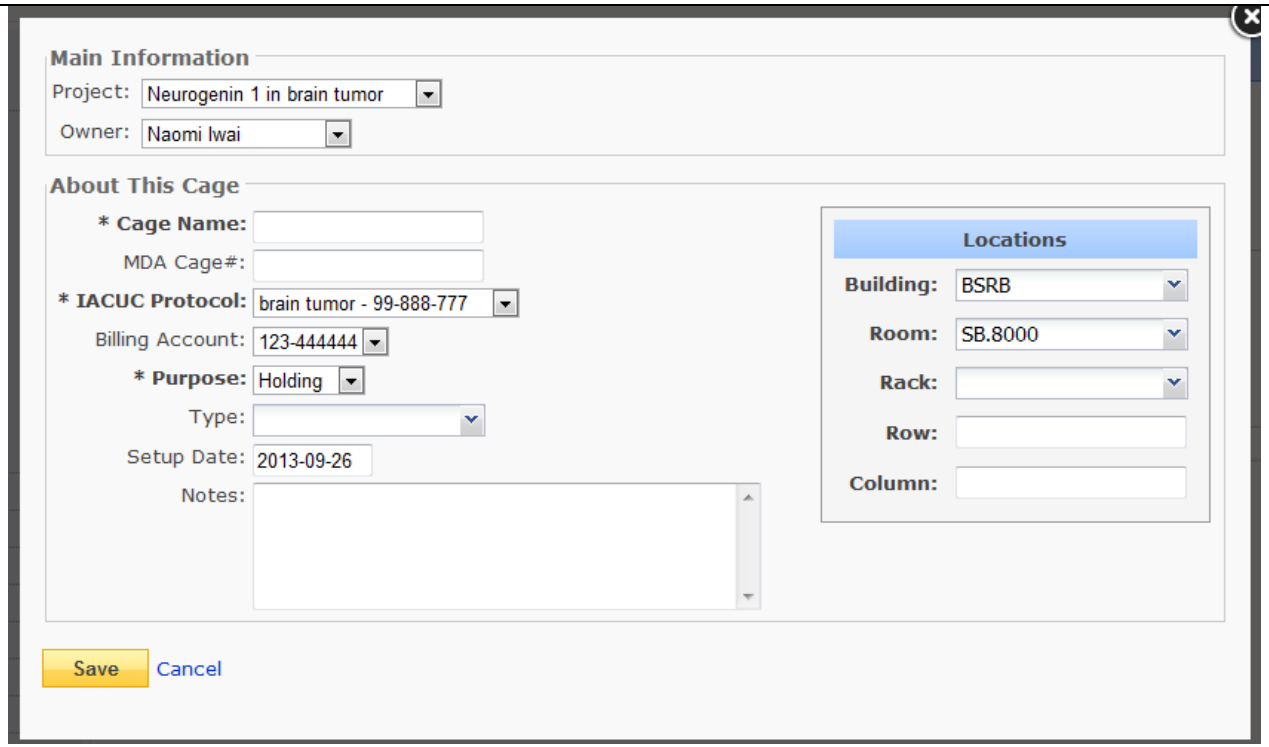
You can use the Move button to move the animals to a cage (first select the animals you want to move by checking the check boxes)

(In this example I am moving 3 animals; Swiss 1, 2, and 3)

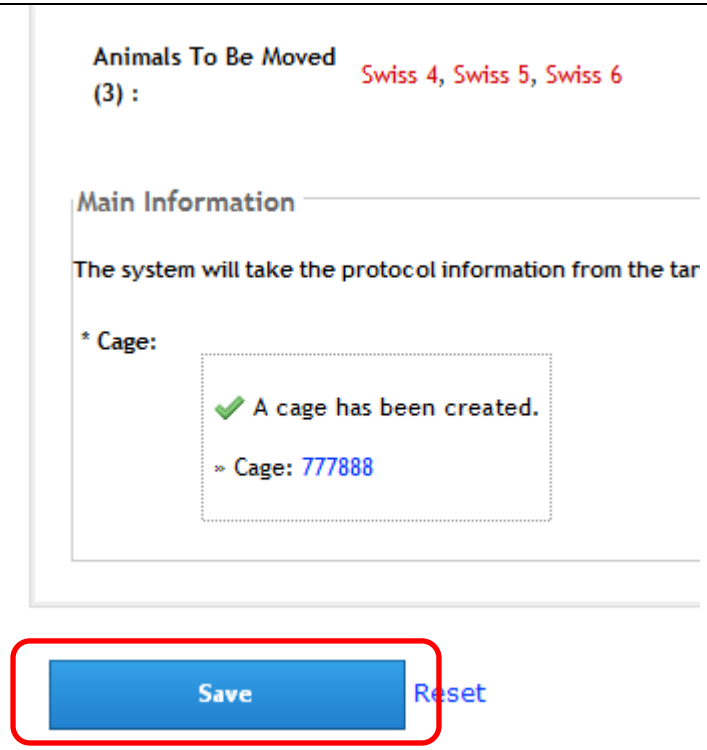


You can choose where to move the animals: to an existing cage or to a new cage.	
If you select Choose from all active cages, you will see all cages in this Project. Select one and click Save (the animals will be moved to this cage).	

Or you can select Set up a new cage, and the Create Cage window will display. Enter cage information and click Save.



Now a new cage has been created.


Animals To Be Moved (3) :
Swiss 4, Swiss 5, Swiss 6
Main Information
The system will take the protocol information from the tar
* Cage:
A cage has been created.
» Cage: 777888
Save
Reset

Click on Save(and the animals will be moved to this new cage).

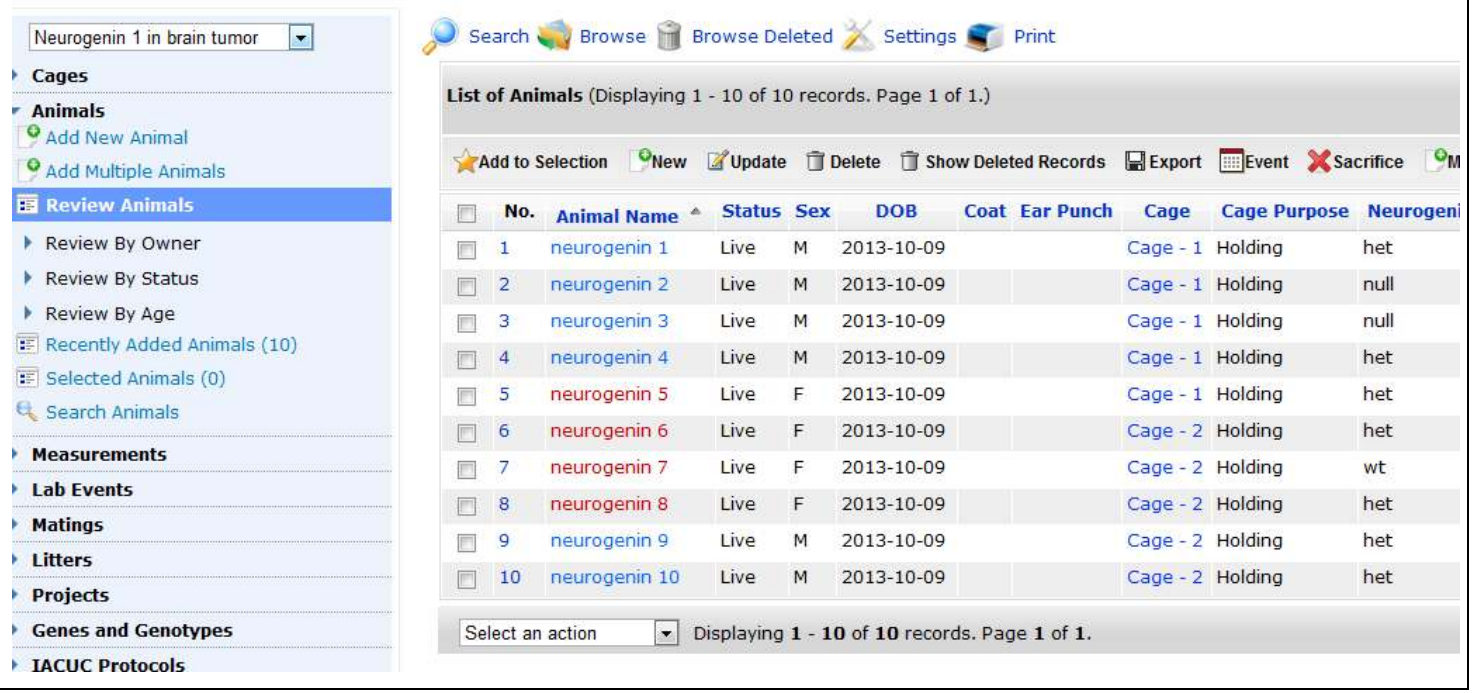
Note: don't forget to click on Save or animals will not be moved to the new cage

Tip: When adding multiple animals and moving them to cages, and you want to go back to the list of newly added animals, you can click on **Recently Added Animals**:

A list of animals created in the last 24 hours will be displayed.

Review Animals

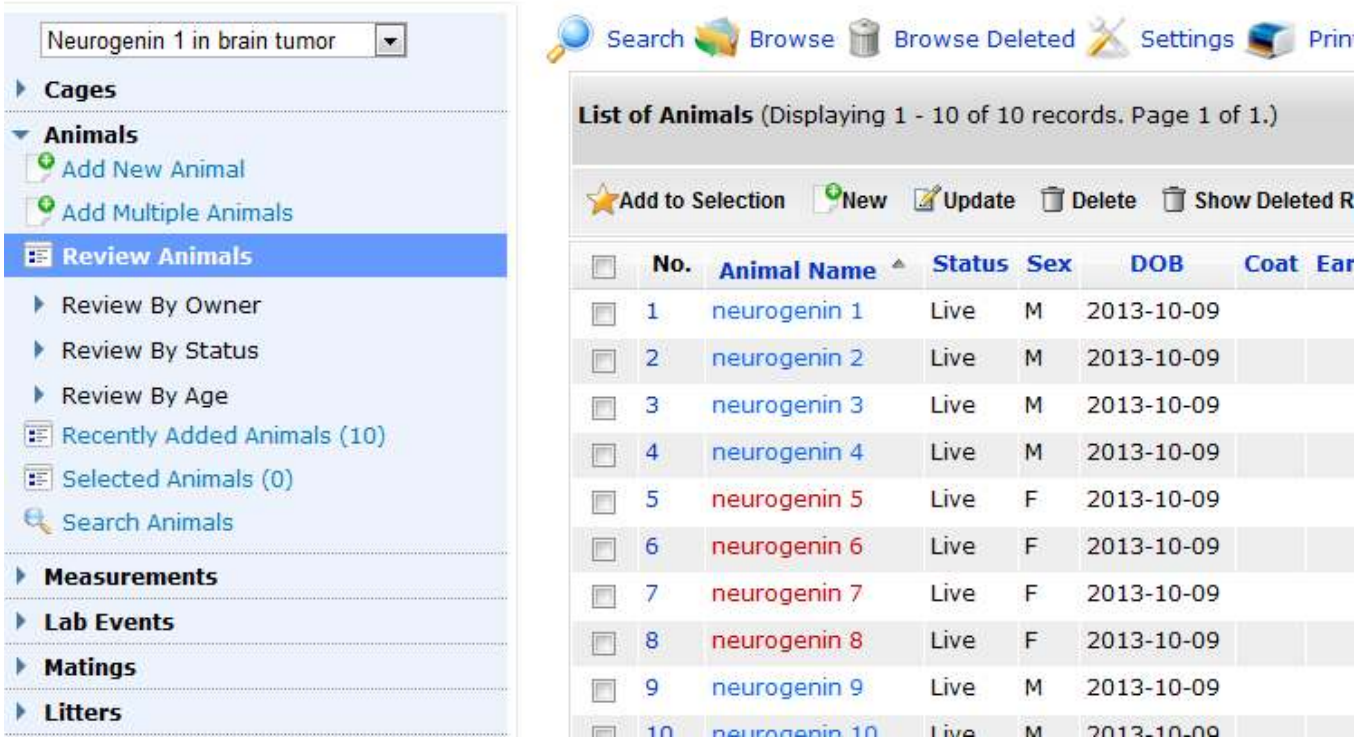
1. **In left hand menu, select Animals > Review Animals**

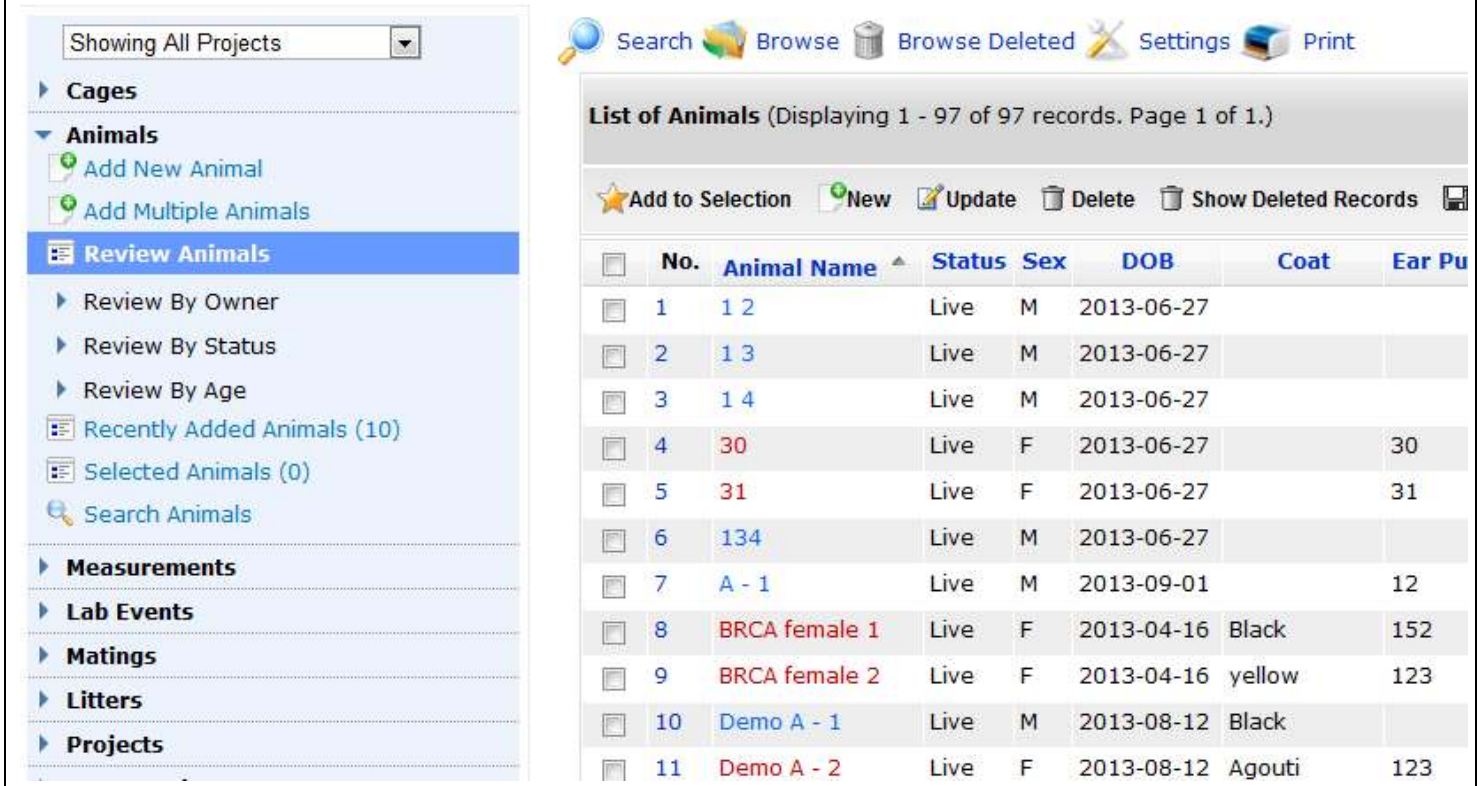

Neurogenin 1 in brain tumor
Cages
Animals
Add New Animal
Add Multiple Animals
Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (10)
Selected Animals (0)
Search Animals
Measurements
Lab Events
Matings
Litters
Projects
Genes and Genotypes
IACUC Protocols
Search
Browse
Browse Deleted
Settings
Print
List of Animals (Displaying 1 - 10 of 10 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
Export
Event
Sacrifice
No. Animal Name Status Sex DOB Coat Ear Punch Cage Cage Purpose Neurogeni
1 neurogenin 1 Live M 2013-10-09 Cage - 1 Holding het
2 neurogenin 2 Live M 2013-10-09 Cage - 1 Holding null
3 neurogenin 3 Live M 2013-10-09 Cage - 1 Holding null
4 neurogenin 4 Live M 2013-10-09 Cage - 1 Holding het
5 neurogenin 5 Live F 2013-10-09 Cage - 1 Holding het
6 neurogenin 6 Live F 2013-10-09 Cage - 2 Holding het
7 neurogenin 7 Live F 2013-10-09 Cage - 2 Holding wt
8 neurogenin 8 Live F 2013-10-09 Cage - 2 Holding het
9 neurogenin 9 Live M 2013-10-09 Cage - 2 Holding het
10 neurogenin 10 Live M 2013-10-09 Cage - 2 Holding het
Select an action
Displaying 1 - 10 of 10 records. Page 1 of 1.

2. Select Project

If you select a Project, you will see all animals in the Project.

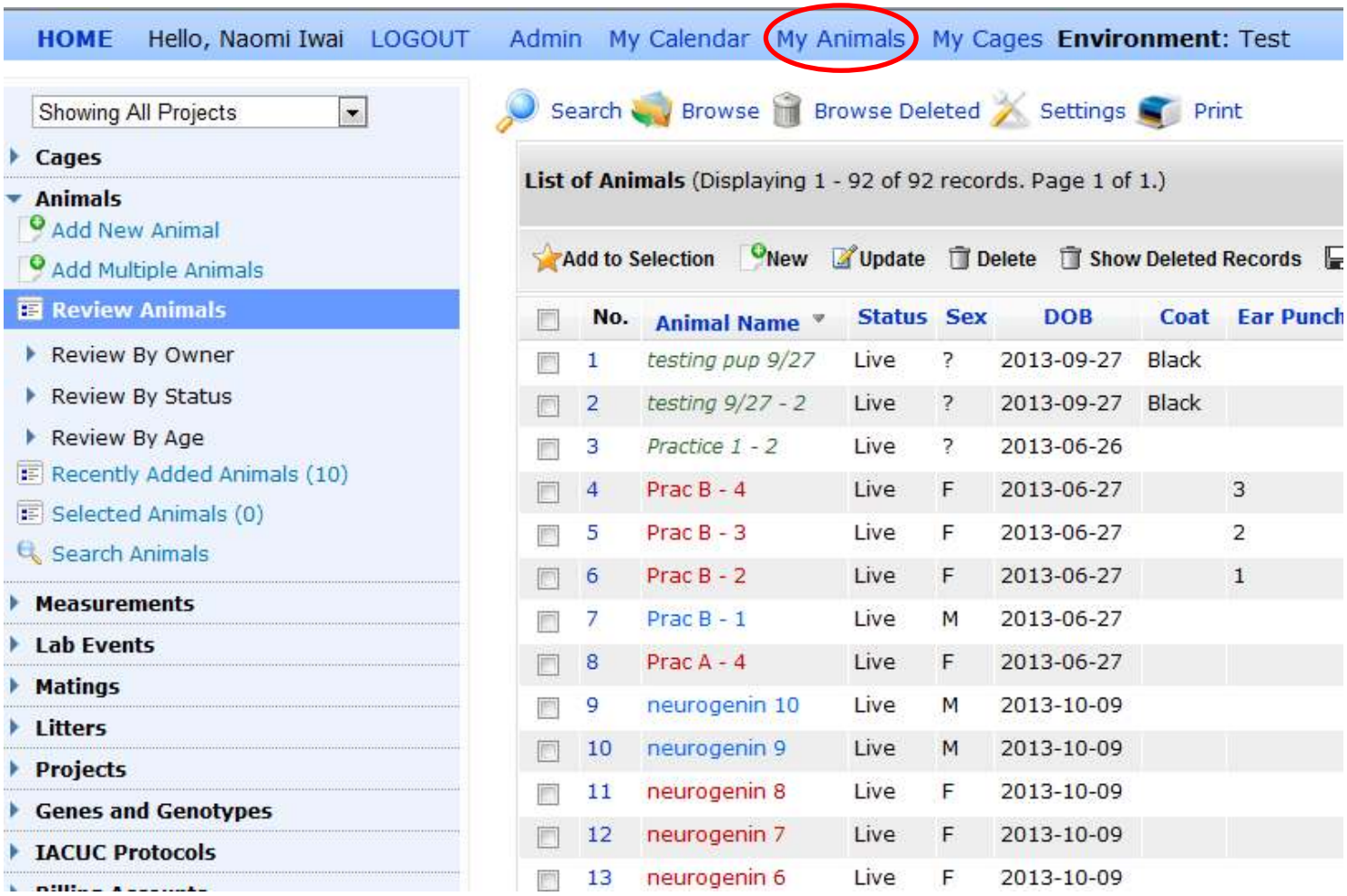
You can also select Showing All Projects and you will see all animals in your lab.



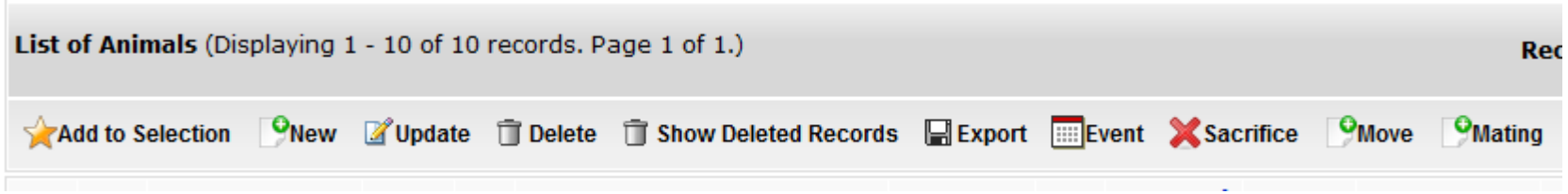

Showing All Projects
Cages
Animals
Add New Animal
Add Multiple Animals
Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (10)
Selected Animals (0)
Search Animals
Measurements
Lab Events
Matings
Litters
Projects
Search
Browse
Browse Deleted
Settings
Print
List of Animals (Displaying 1 - 97 of 97 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
No.
Animal Name
Status
Sex
DOB
Coat
Ear Pu
1 1 2 Live M 2013-06-27
2 1 3 Live M 2013-06-27
3 1 4 Live M 2013-06-27
4 30 Live F 2013-06-27 30
5 31 Live F 2013-06-27 31
6 134 Live M 2013-06-27
7 A - 1 Live M 2013-09-01 12
8 BRCA female 1 Live F 2013-04-16 Black 152
9 BRCA female 2 Live F 2013-04-16 yellow 123
10 Demo A - 1 Live M 2013-08-12 Black
11 Demo A - 2 Live F 2013-08-12 Agouti 123

My Animals

In top menu bar, you will find a shortcut button called My Animals. If you click on this, all your animals will be displayed in one list:


HOME Hello, Naomi Iwai LOGOUT Admin My Calendar My Animals My Cages Environment: Test
Showing All Projects
Cages
Animals
Add New Animal
Add Multiple Animals
Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (10)
Selected Animals (0)
Search Animals
Measurements
Lab Events
Matings
Litters
Projects
Genes and Genotypes
IACUC Protocols
Search Browse Browse Deleted Settings Print
List of Animals (Displaying 1 - 92 of 92 records. Page 1 of 1.)
Add to Selection New Update Delete Show Deleted Records
No. Animal Name Status Sex DOB Coat Ear Punch
1 testing pup 9/27 Live ? 2013-09-27 Black
2 testing 9/27 - 2 Live ? 2013-09-27 Black
3 Practice 1 - 2 Live ? 2013-06-26
4 Prac B - 4 Live F 2013-06-27 3
5 Prac B - 3 Live F 2013-06-27 2
6 Prac B - 2 Live F 2013-06-27 1
7 Prac B - 1 Live M 2013-06-27
8 Prac A - 4 Live F 2013-06-27
9 neurogenin 10 Live M 2013-10-09
10 neurogenin 9 Live M 2013-10-09
11 neurogenin 8 Live F 2013-10-09
12 neurogenin 7 Live F 2013-10-09
13 neurogenin 6 Live F 2013-10-09

Shortcut buttons for Review Animals List:



Add to Selection: see below The Animal "Shopping Cart"

New: Add New Animal button (see above Add New Animal)

Update: see below Update Animal Information

Delete / Show Deleted Records: see below Delete Animals

Export: use this button to export your records to Excel

Event: see Section 8 Lab Events

Sacrifice: see below Sacrifice Animals

Move: use this button to move animals to a different cage (see above Add Multiple Animals, and below Move Animals)

Mating: see Section 7 Matings and Litters

Note: you can change the order of these buttons by dragging them left and right.

The same actions are also available at the bottom of the Review Animals List:

					09			
☐	43	pup	Live	M	2013-10-13	Cage - 8	Holding	
☐	44	pup	Live	M	2013-10-13	Cage - 8	Holding	
☐	45	pup	Live	M	2013-10-13	Cage - 8	Holding	
☐	46	pup	Live	F	2013-10-13	Cage - 7	Holding	
☐	47	pup	Live	F	2013-10-13	Cage - 7	Holding	
☐	48	pup	Live	F	2013-10-13	Cage - 7	Holding	
☐	49	pup	Live	M	2013-10-13	Cage - 8	Holding	

Select an action

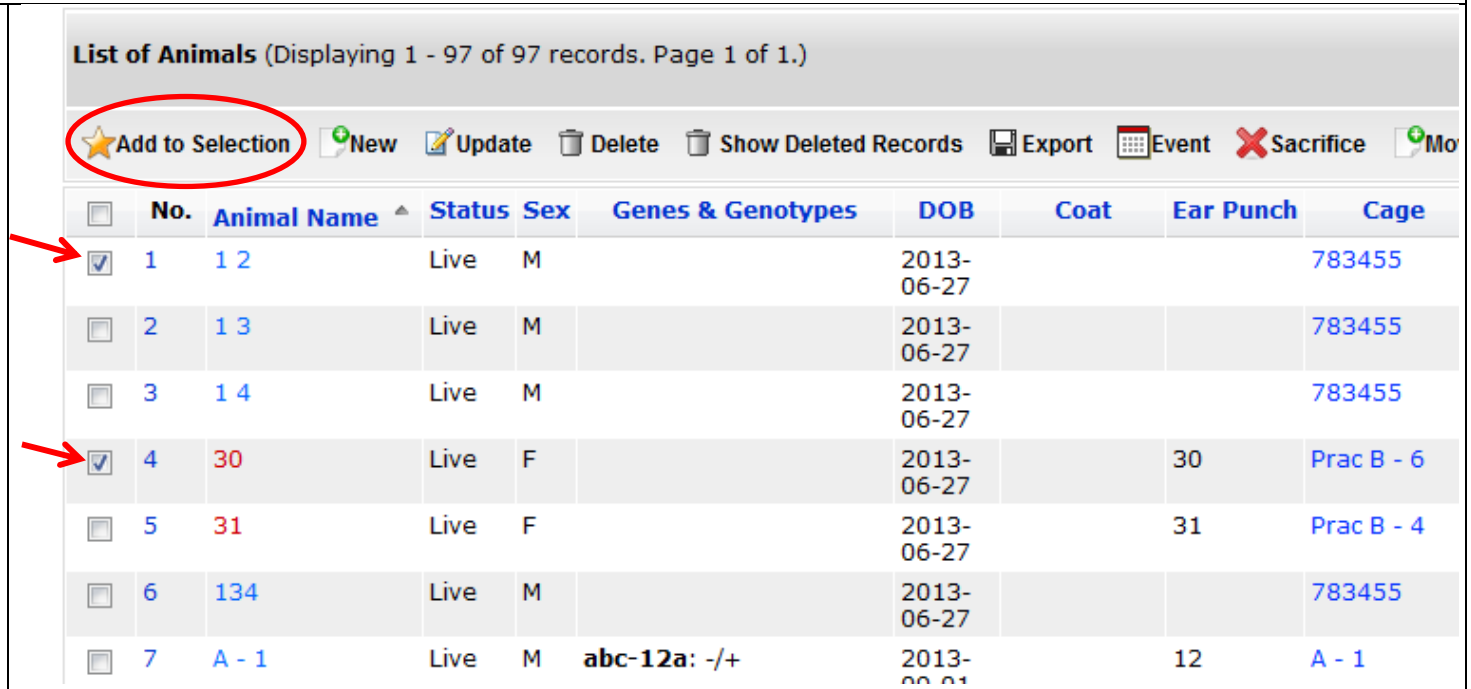
Displaying **1** - **49** of **49** records. Page **1** of **1**.

43 pup Live M 2013-10-13 Cage - 8 Holding
44 pup Live M 2013-10-13 Cage - 8 Holding
45 pup Live M 2013-10-13 Cage - 8 Holding
46 pup Live F 2013-10-13 Cage - 7 Holding
Live F 2013-10-13 Cage - 7 Holding
Live F 2013-10-13 Cage - 7 Holding
Live M 2013-10-13 Cage - 8 Holding
Select an action
Add to Selection
New
Update
Delete
Show Deleted Records
Export
Event
Sacrifice
Move
Mating
Select an action
Displaying 1 - 49 of 49 records. Page 1 of 1.

The Animal "Shopping Cart"

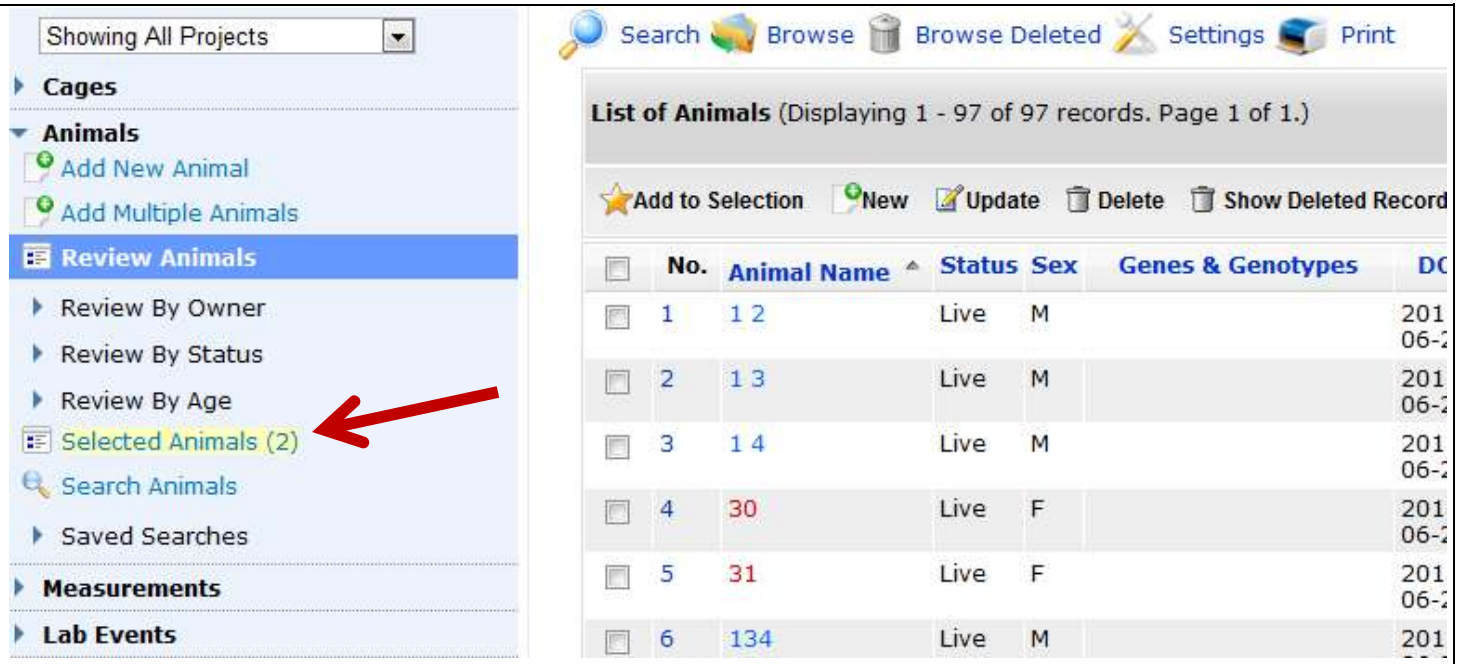
This feature allows you to select animals that you want to temporarily group together for a mating, event, etc.
The Shopping Cart function is available for all other records such as Cages, Matings, Litters, etc. and the same instructions apply.

1. **In Review Animals List, select the animals that you want to group together by checking the check boxes.**
2. **Click on Add to Selection**


List of Animals (Displaying 1 - 97 of 97 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
Export
Event
Sacrifice
No.
Animal Name
Status
Sex
Genes & Genotypes
DOB
Coat
Ear Punch
Cage
1 1 2 Live M 2013-06-27 783455
2 1 3 Live M 2013-06-27 783455
3 1 4 Live M 2013-06-27 783455
4 30 Live F 2013-06-27 30 Prac B - 6
5 31 Live F 2013-06-27 31 Prac B - 4
6 134 Live M 2013-06-27 783455
7 A - 1 Live M abc-12a: -/+ 2013- 12 A - 1

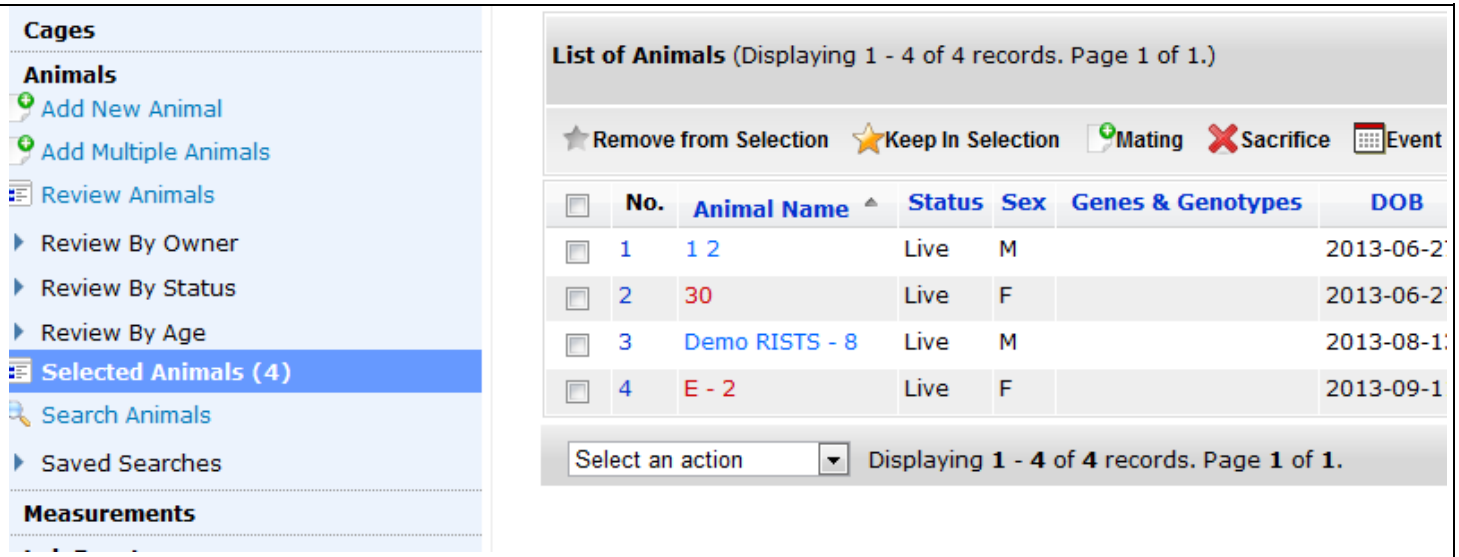
3. **Note that in left hand menu, Selected Animals is now highlighted and you see the number of animals**
4. **Continue to add animals to the shopping cart if applicable**

<u>This feature is convenient when you have to go through a long list of records or through different pages to select your desired records.</u>

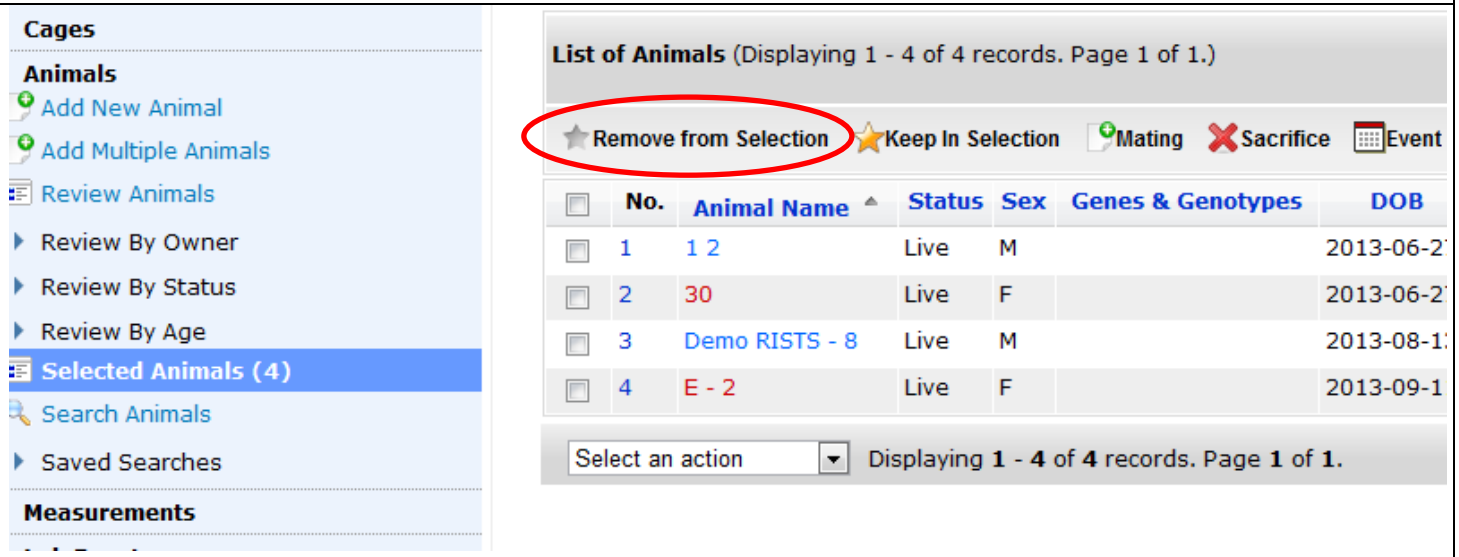


5. **Click on Selected Animals**
6. **Your selected animals will be displayed in a list.**

From here, you can use these animals to set up matings, sacrifice them, set up an event, etc.



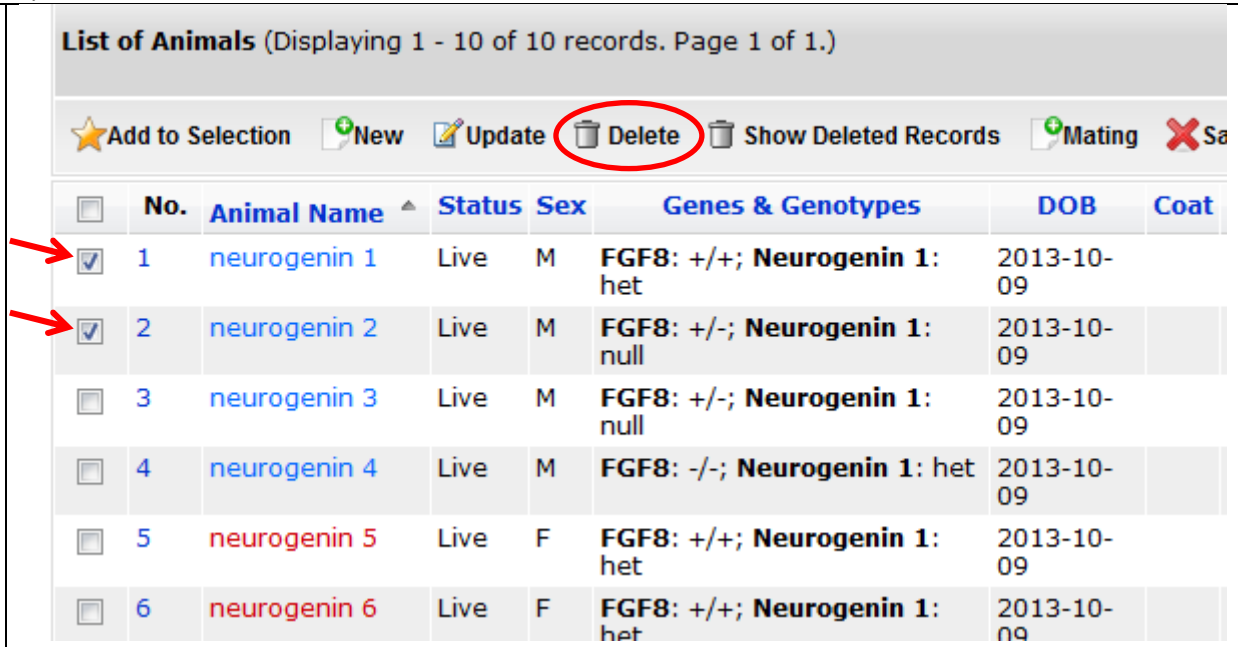
To empty the Shopping Cart, use the Remove from Selection button



Delete Animals

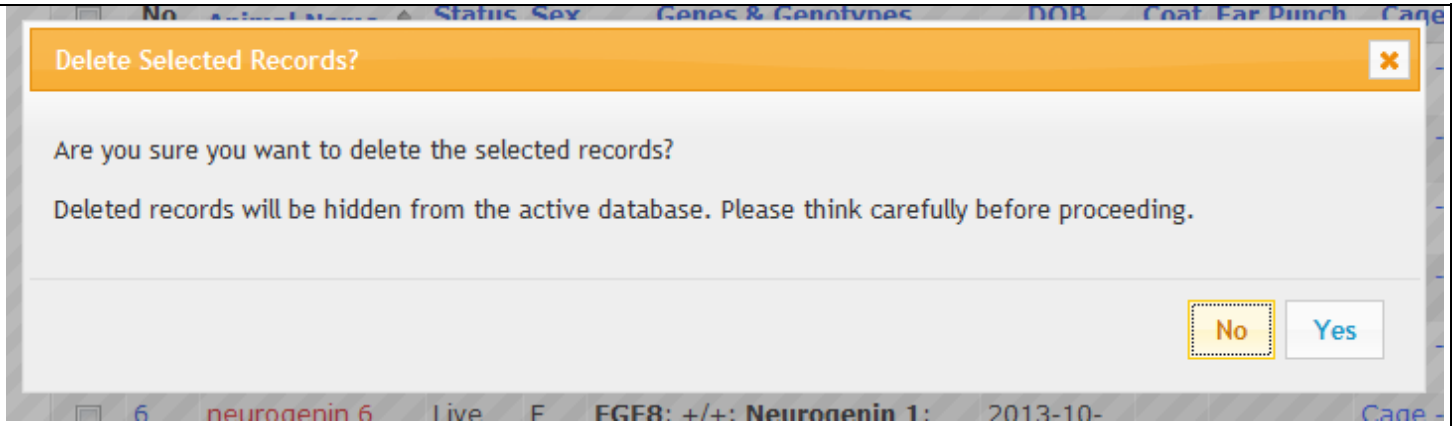
You can delete animals and recover them at any time. This Delete function is available for all other records such as cages, matings, etc. **Note**: deleted records are removed from the active database. Although you can recover them at any time (your deleted items are never permanently deleted), **it is best practice to reserve the Delete function for erroneous records only**. When animals are dead, use the Sacrifice function (see Sacrifice Animals below) or mark their status as Dead.

1. **In Review Animals List, select the animals that you want to delete by checking the check boxes.**
2. **Click on Delete**


List of Animals (Displaying 1 - 10 of 10 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
Mating
No.
Animal Name
Status
Sex
Genes & Genotypes
DOB
Coat
1 neurogenin 1 Live M FGF8: +/+; Neurogenin 1: het 2013-10-09
2 neurogenin 2 Live M FGF8: +/-; Neurogenin 1: null 2013-10-09
3 neurogenin 3 Live M FGF8: +/-; Neurogenin 1: null 2013-10-09
4 neurogenin 4 Live M FGF8: -/-; Neurogenin 1: het 2013-10-09
5 neurogenin 5 Live F FGF8: +/+; Neurogenin 1: het 2013-10-09
6 neurogenin 6 Live F FGF8: +/+; Neurogenin 1:

3. **You will see a message to confirm the Delete action.**

4. **Click on Yes to proceed.**

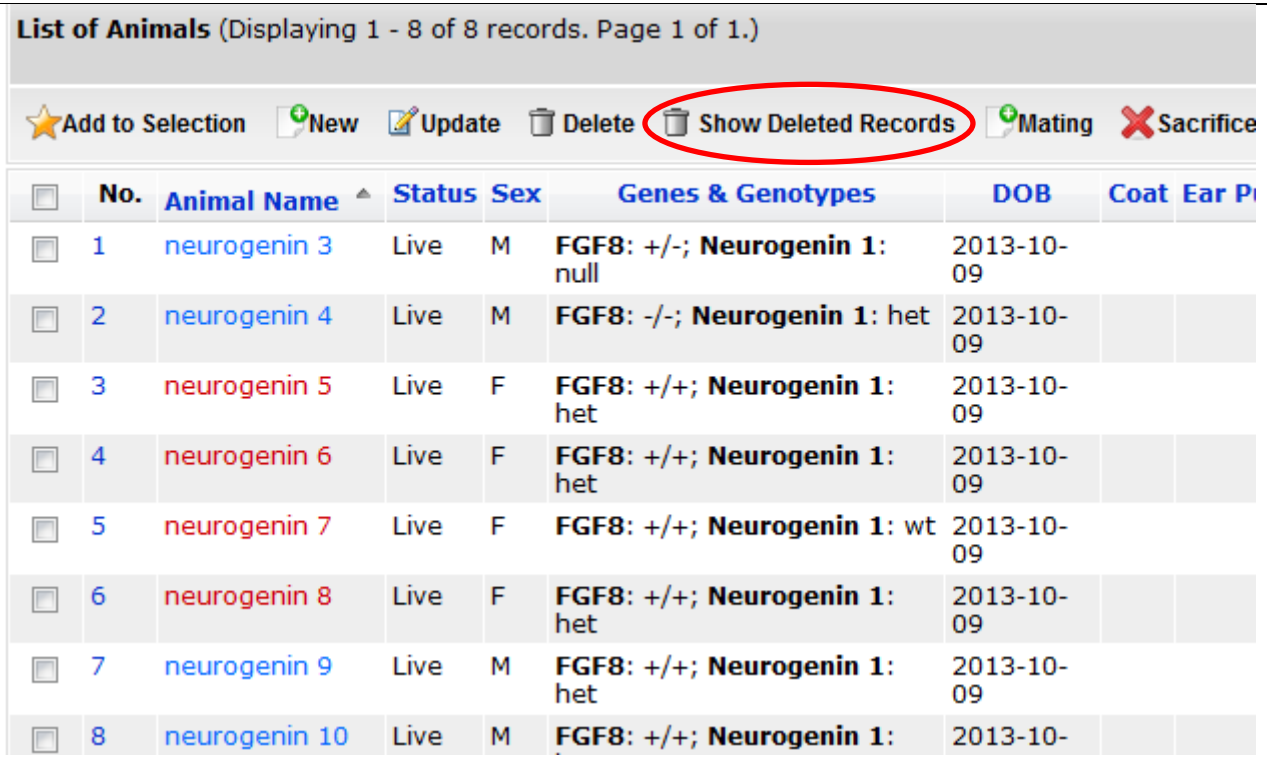

Delete Selected Records?
Are you sure you want to delete the selected records?
Deleted records will be hidden from the active database. Please think carefully before proceeding.
No
Yes

5. **Note that the deleted records are not visible anymore**

List of Animals (Displaying 1 - 8 of 8 records. Page 1 of 1.)

Add to Selection | New | Update | Delete | Show Deleted Records | Mating | Sacrifice

No.	Animal Name	Status	Sex	Genes & Genotypes	DOB	Coat	Ear P
1	neurogenin 3	Live	M	**FGF8**: +/-; **Neurogenin 1**: null	2013-10-09		
2	neurogenin 4	Live	M	**FGF8**: -/-; **Neurogenin 1**: het	2013-10-09		
3	neurogenin 5	Live	F	**FGF8**: +/+; **Neurogenin 1**: het	2013-10-09		
4	neurogenin 6	Live	F	**FGF8**: +/+; **Neurogenin 1**: het	2013-10-09		
5	neurogenin 7	Live	F	**FGF8**: +/+; **Neurogenin 1**: wt	2013-10-09		
6	neurogenin 8	Live	F	**FGF8**: +/+; **Neurogenin 1**: het	2013-10-09		
7	neurogenin 9	Live	M	**FGF8**: +/+; **Neurogenin 1**: het	2013-10-09		
8	neurogenin 10	Live	M	**FGF8**: +/+; **Neurogenin 1**:	2013-10-		

To view the deleted records, click on Show Deleted Records	
A list of Deleted animals will display. **You can recover animals by clicking on the Undelete button.**	

List of Deleted Animals (Displaying 1 - 2 of 2 records. Page 1 of 1.)

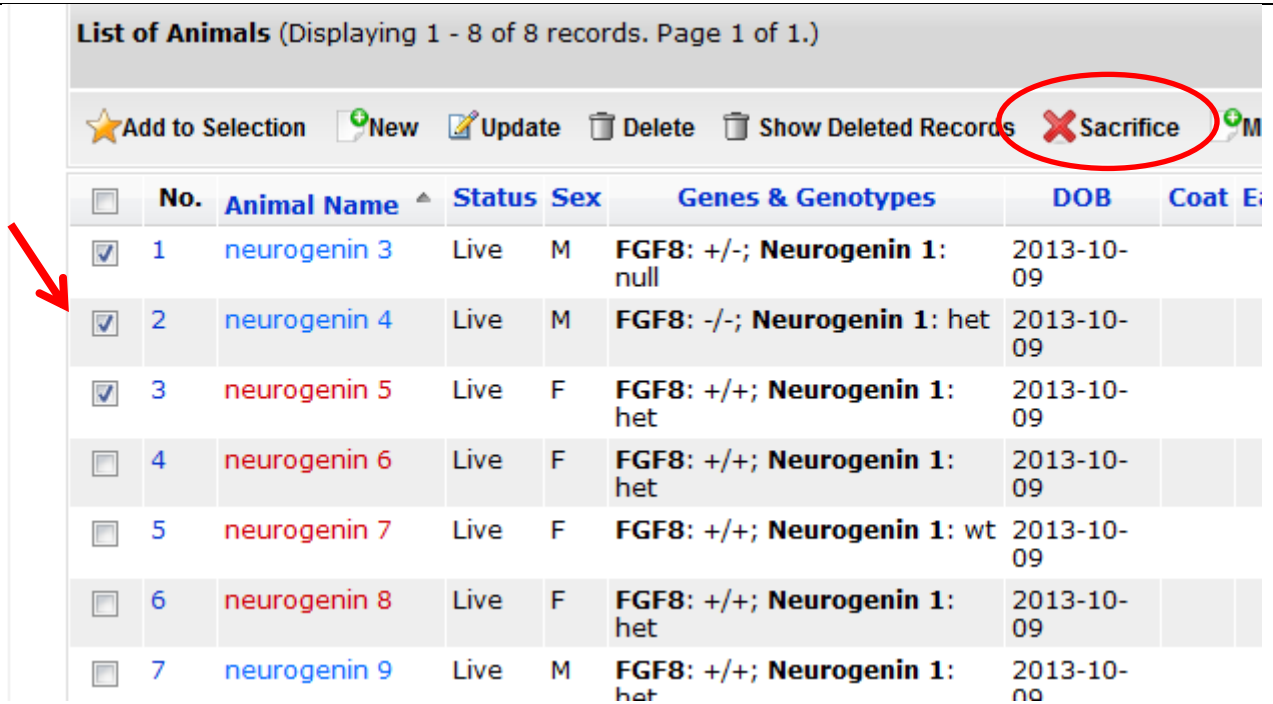
New Export Show Active Records Undelete

	No.	Animal Name	Status	Sex	Genes & Genotypes	DOB
	1	neurogenin 1	Live	M	**FGF8**: +/+; **Neurogenin 1**: het	2013-10-09
	2	neurogenin 2	Live	M	**FGF8**: +/-; **Neurogenin 1**: null	2013-10-09

Select an action Displaying **1** - **2** of **2** records. Page **1** of **1**.

Sacrifice Animals

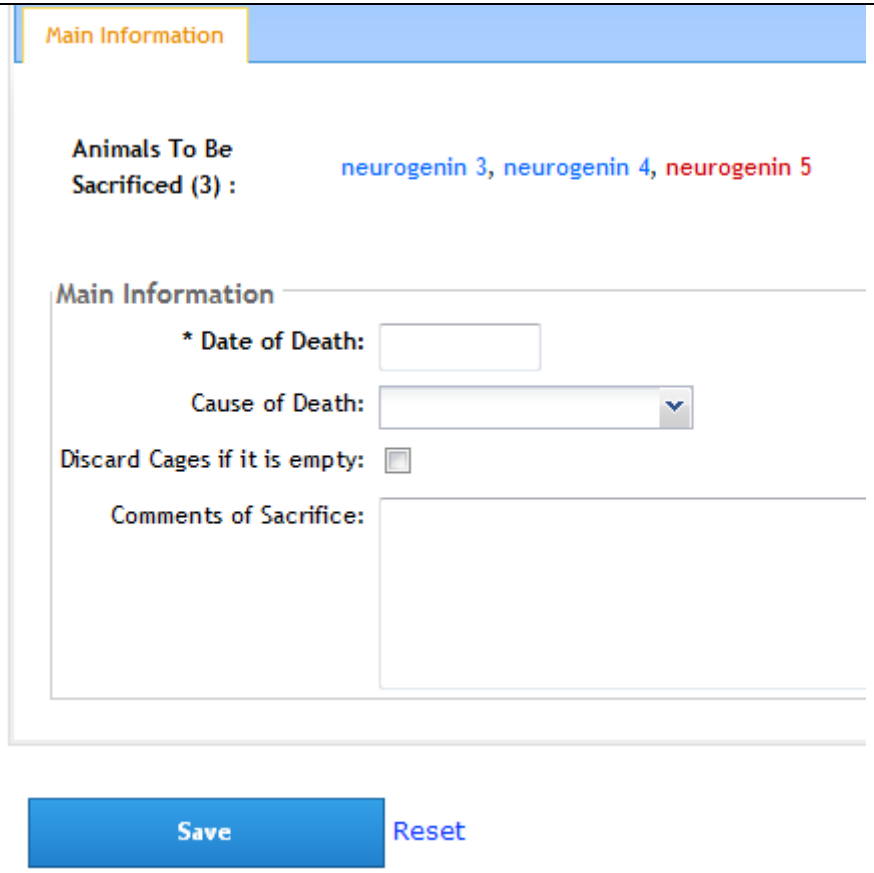
1. **In Review Animals List, select the animals that you want to sacrifice by checking the check boxes.**
2. **Click on Sacrifice**


List of Animals (Displaying 1 - 8 of 8 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
Sacrifice
No.
Animal Name
Status
Sex
Genes & Genotypes
DOB
Coat
1 neurogenin 3 Live M FGF8: +/-; Neurogenin 1: null 2013-10-09
2 neurogenin 4 Live M FGF8: -/-; Neurogenin 1: het 2013-10-09
3 neurogenin 5 Live F FGF8: +/+; Neurogenin 1: het 2013-10-09
4 neurogenin 6 Live F FGF8: +/+; Neurogenin 1: het 2013-10-09
5 neurogenin 7 Live F FGF8: +/+; Neurogenin 1: wt 2013-10-09
6 neurogenin 8 Live F FGF8: +/+; Neurogenin 1: het 2013-10-09
7 neurogenin 9 Live M FGF8: +/+; Neurogenin 1: 2013-10-

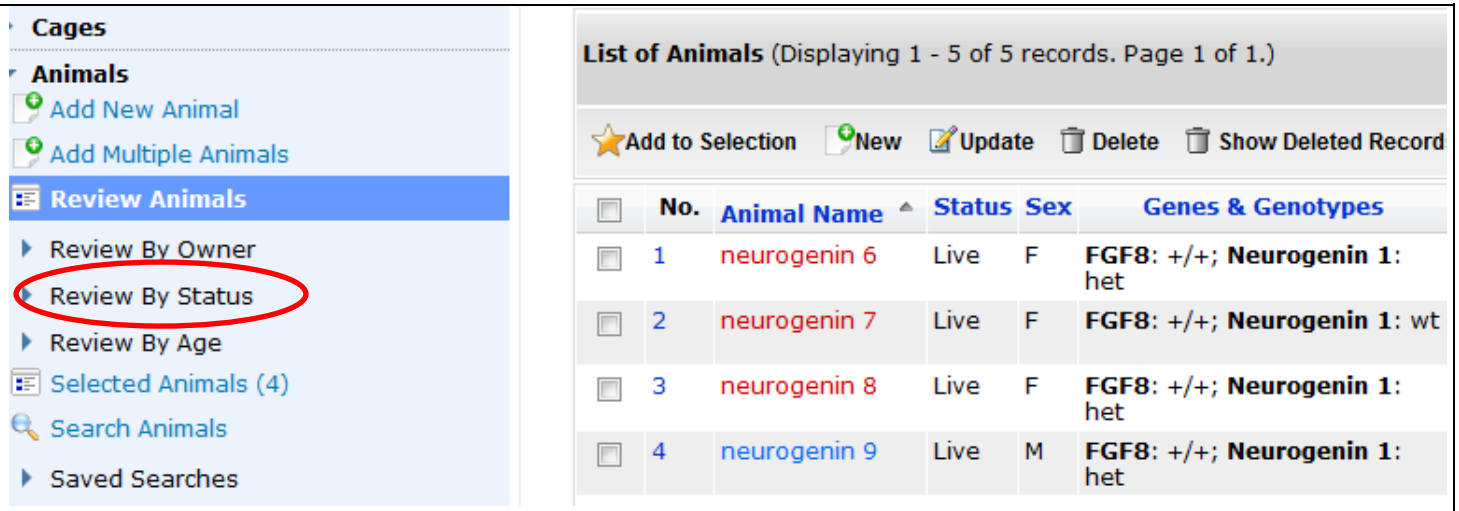
3. **The Sacrifice Animal window displays.**
4. **Enter Date of Death (mandatory) and other information if applicable**

Note: if you check 'Discard Cages if it is empty', the system will automatically discard the cage, only if there are no other live animals left in that cage.

5. **Click Save**



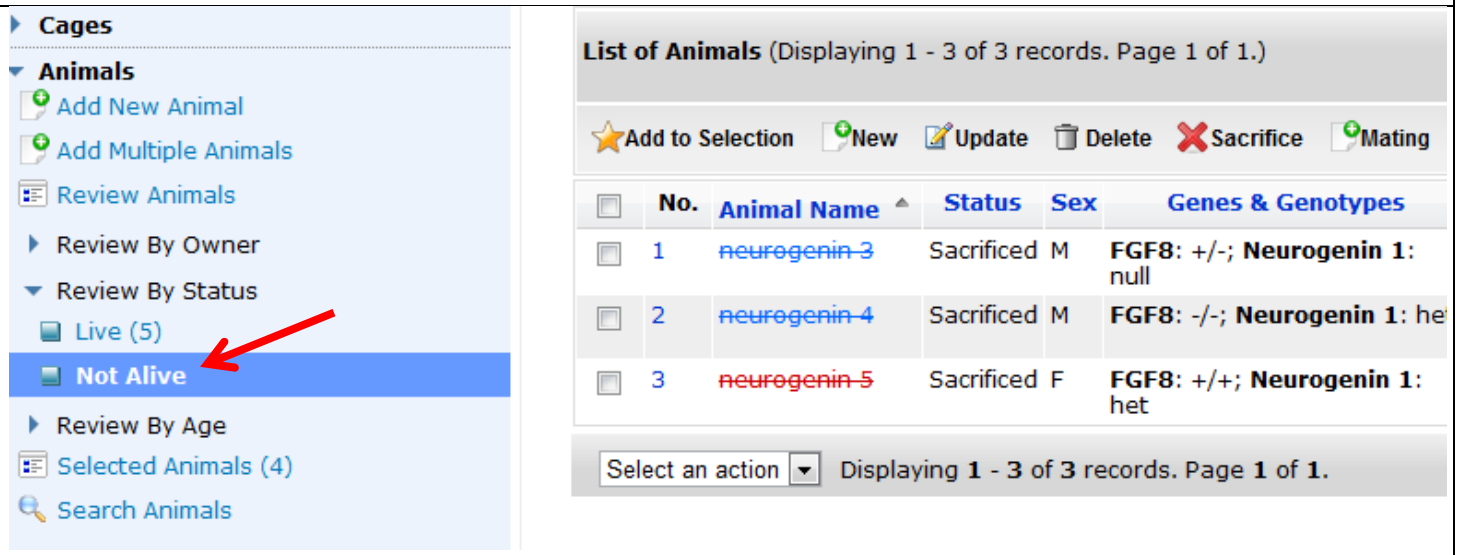
6. **Note that the sacrificed animals are not visible anymore.**
7. **To view sacrificed animals, click on Animals > Review By Status**



8. **Click on Not Alive. List of Dead Animals displays.**

<u>Note that in mLIMS, dead animals are displayed with strikethrough</u>

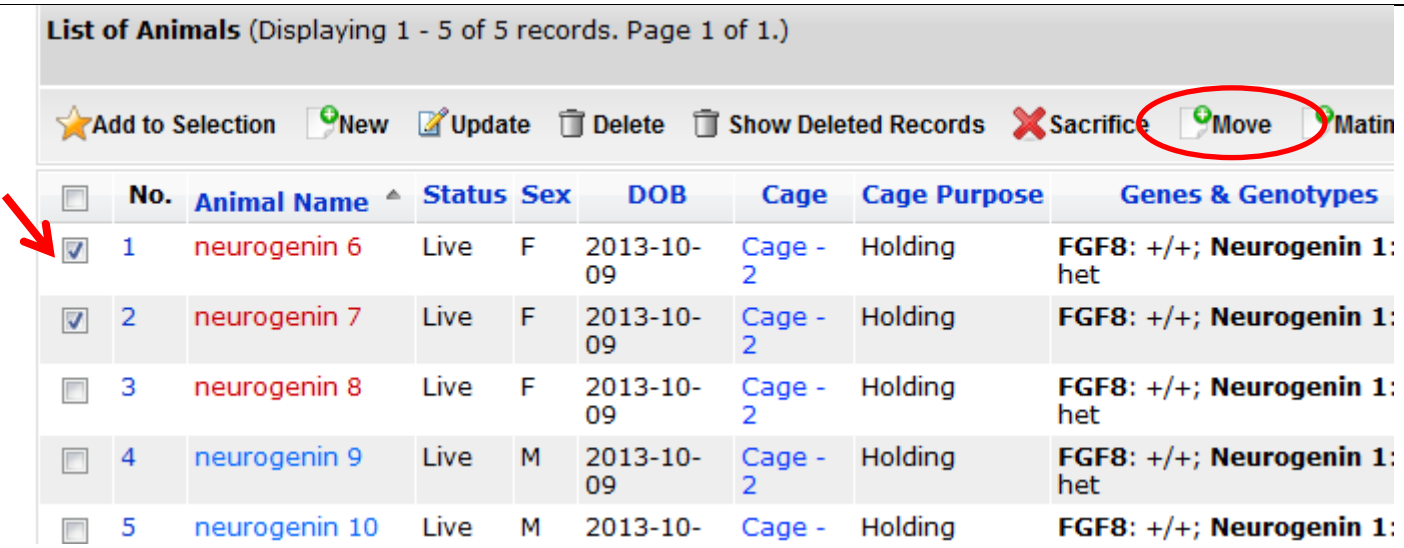
You can "revive" dead animals by clicking Update and changing the Status to Live.

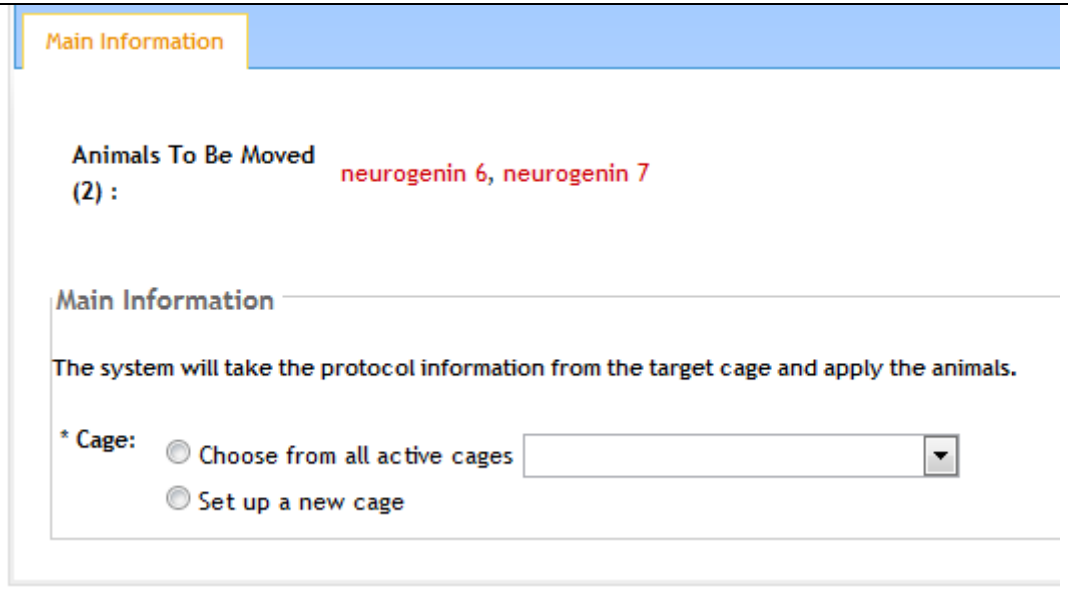


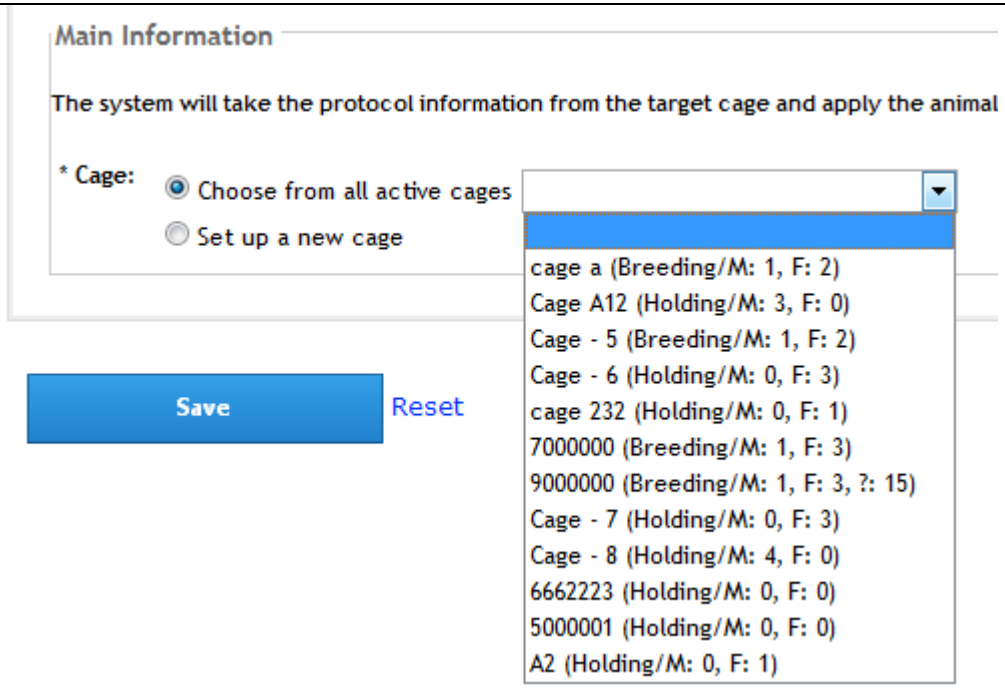
Move Animals

You can move animals to a different cage within the same Project or to a different Project.

1. **In Review Animals List, select the animals that you want to move by checking the check boxes.**
2. **Click on Move**


List of Animals (Displaying 1 - 5 of 5 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
Sacrifice
Move
Matin
No.
Animal Name
Status
Sex
DOB
Cage
Cage Purpose
Genes & Genotypes
1 neurogenin 6 Live F 2013-10-09 Cage - 2 Holding FGF8: +/+; Neurogenin 1: het
2 neurogenin 7 Live F 2013-10-09 Cage - 2 Holding FGF8: +/+; Neurogenin 1:
3 neurogenin 8 Live F 2013-10-09 Cage - 2 Holding FGF8: +/+; Neurogenin 1: het
4 neurogenin 9 Live M 2013-10-09 Cage - 2 Holding FGF8: +/+; Neurogenin 1: het
5 neurogenin 10 Live M 2013-10- Cage - Holding FGF8: +/+; Neurogenin 1:

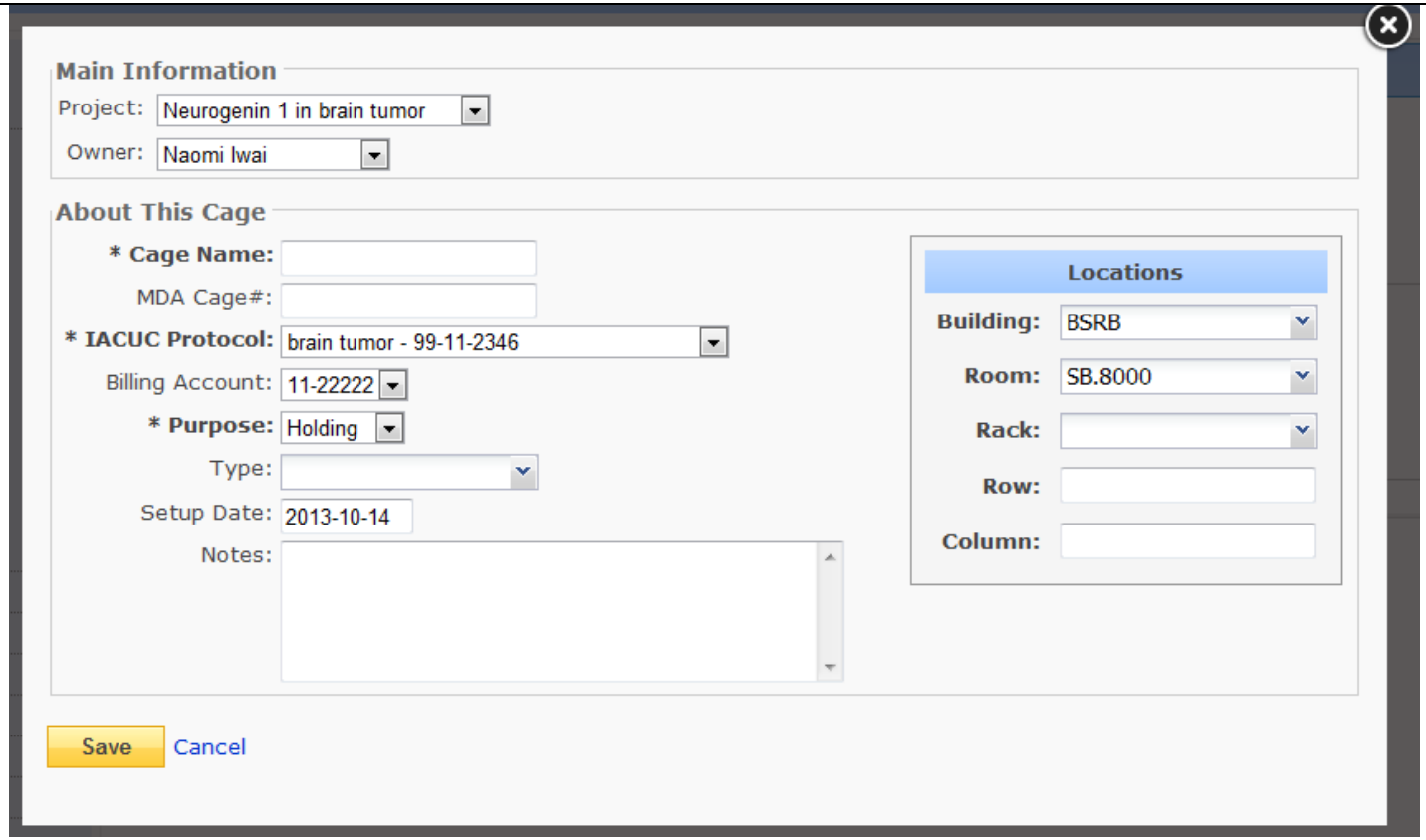
3. Move Animal window displays.	

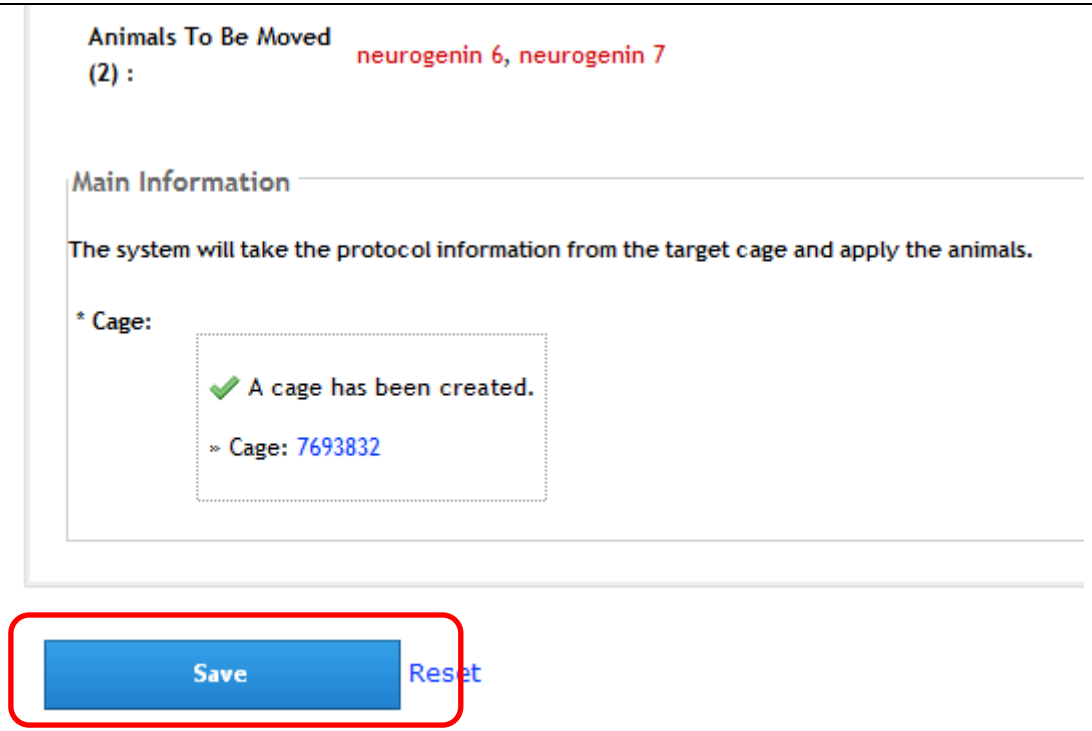
You can move the animals to an existing cage (all active cages in the current Project display)	

Or you can set up a new cage:

Create Cage window displays.

Enter cage information and click Save.



A new cage has been created. **Click Save** **<u>Don't forget to click on Save (or animals will not be moved)</u>**	
Note: **You can move animals to a cage in the same Project, or to a cage in a different Project.** **<u>To move to cage in same Project:</u>** **Make sure that the Project is selected in Projects drop down menu.** **Cages in this Project will display in Choose from all active cages.**	

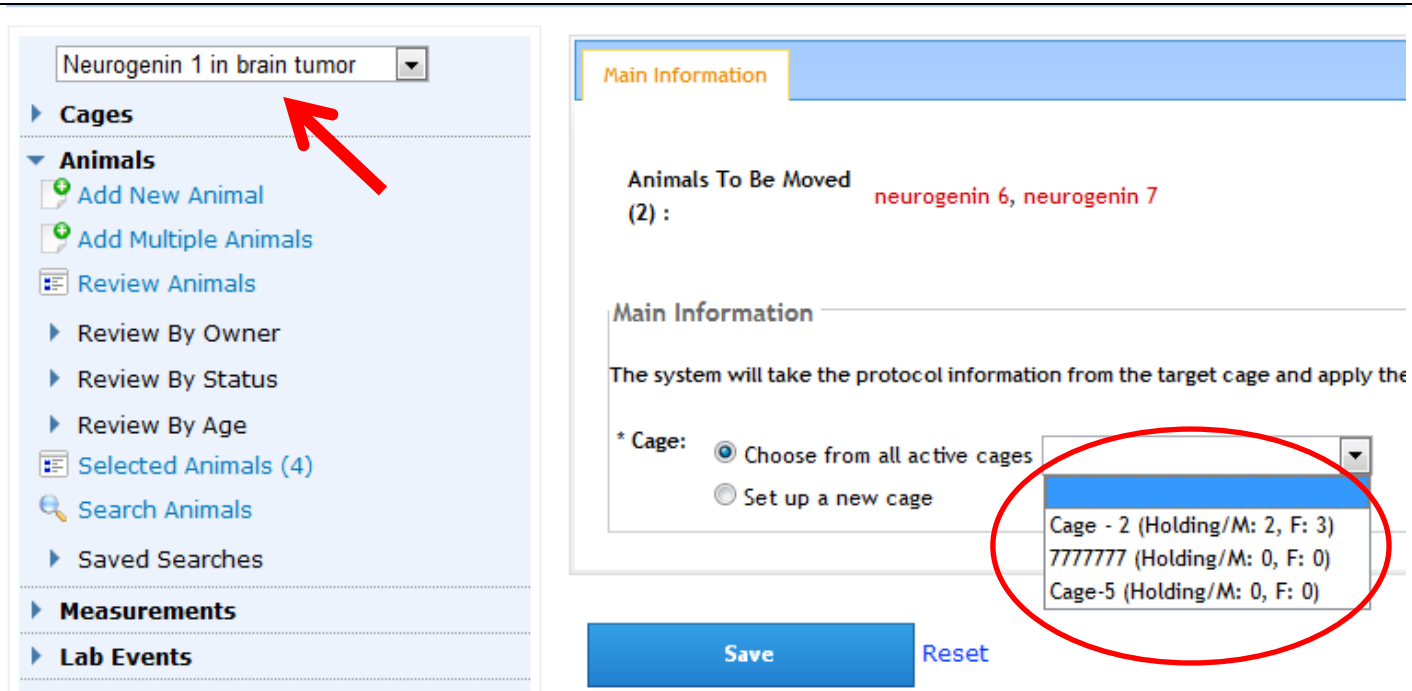
If you choose to set up a new cage, this cage will be created in the selected Project.

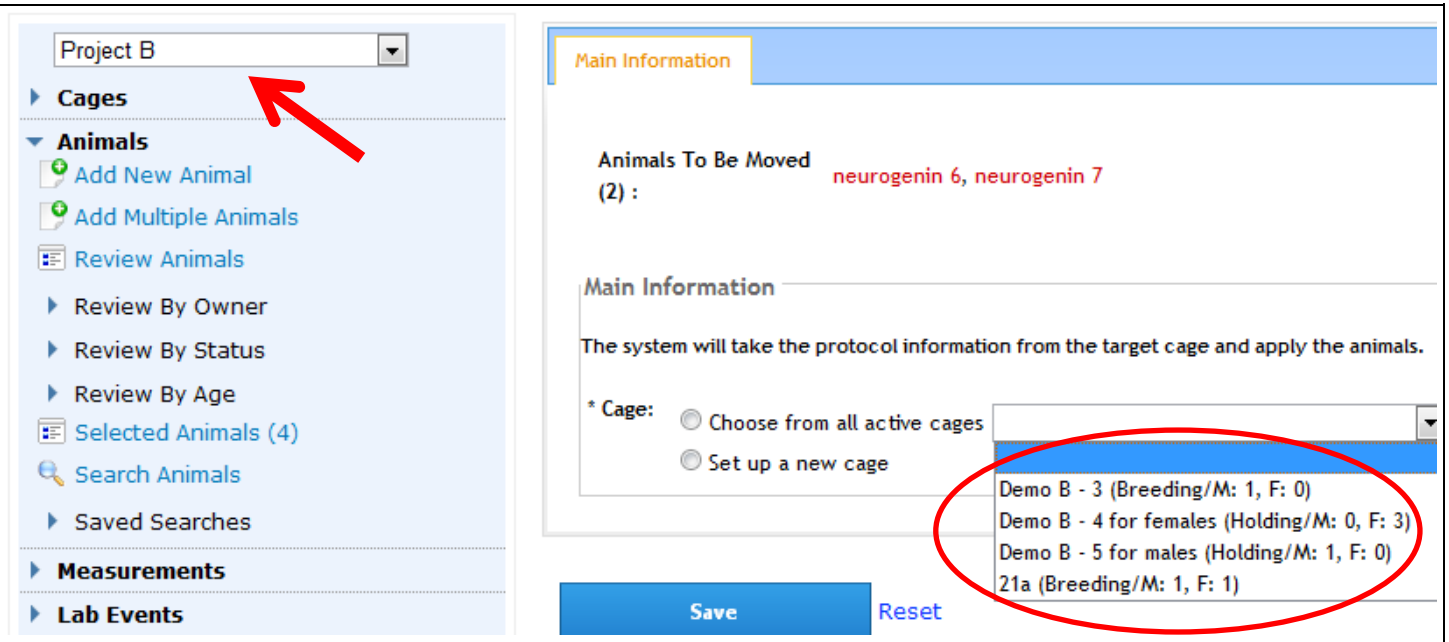
<u>To move to cage in different Project:</u>

Select the target Project in Projects drop down menu.

Cages in this target Project will display in Choose from all active cages.

If you choose to set up a new cage, this cage will be created in the selected target Project.





Scenarios for Move Animal to Different Project:

- If you want to set up a mating between animals that belong to different Projects, you have to use this Move Animal function first to make sure that both breeders are in the same Project.
- If you want to give an animal to another lab member, you can use this Move Animal function to move your animal to your lab member's Project. Note that your lab member will not be able to use this animal if he/she does not have update permission to this animal.

  Example:

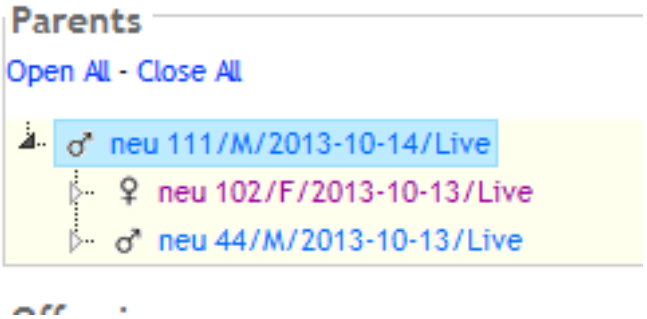
  Naomi moved her animal *neurogenin 9* to Viji's Project. However Viji cannot do anything with this animal (such as mating, updates, etc.) as she does not have ownership of this animal, and she does not have update permission to this record (see below Alert sign: this indicates that you have read-only access to this record.)

  To allow Viji to use this animal and make updates, Naomi can change ownership of this animal to Viji by simply updating the Owner field (the ownership change will remain as a record in the Audit Trails tab under Animal Information).

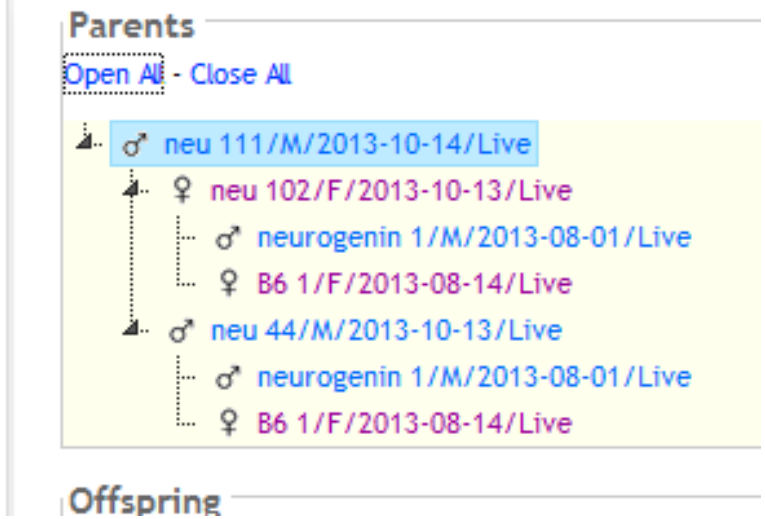
Review Animal Pedigree and Ancestry

In Animal Information, click on the Pedigree tab to review ancestry and pedigree information of the animal.

In this example, you are reviewing the parents of animal *neu 111*:



Click on the arrowheads next to the parents (or click on Open All) to display more generations:


Parents
Open All - Close All
♂ neu 111/M/2013-10-14/Live
♀ neu 102/F/2013-10-13/Live
♂ neurogenin 1/M/2013-08-01/Live
♀ B6 1/F/2013-08-14/Live
♂ neu 44/M/2013-10-13/Live
♂ neurogenin 1/M/2013-08-01/Live
♀ B6 1/F/2013-08-14/Live
Offspring

Update Animal Information

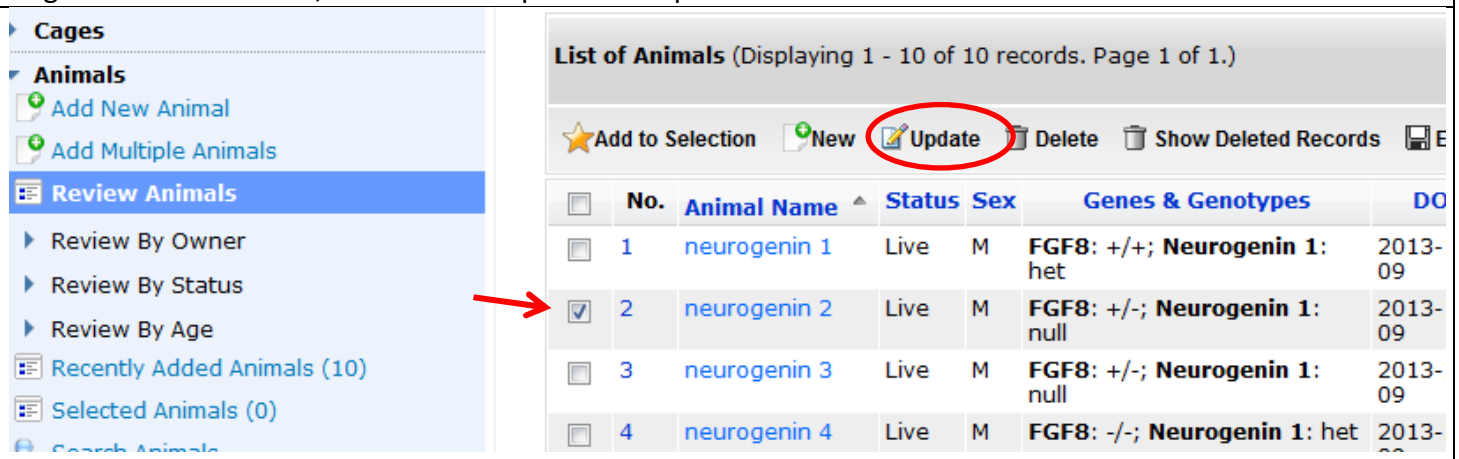
There are two options for bulk-updating animal information, see below in Update Multiple Animals.

<u>Update One Animal:</u>

In Review Animals List, select the animal that you want to update by checking the check box.

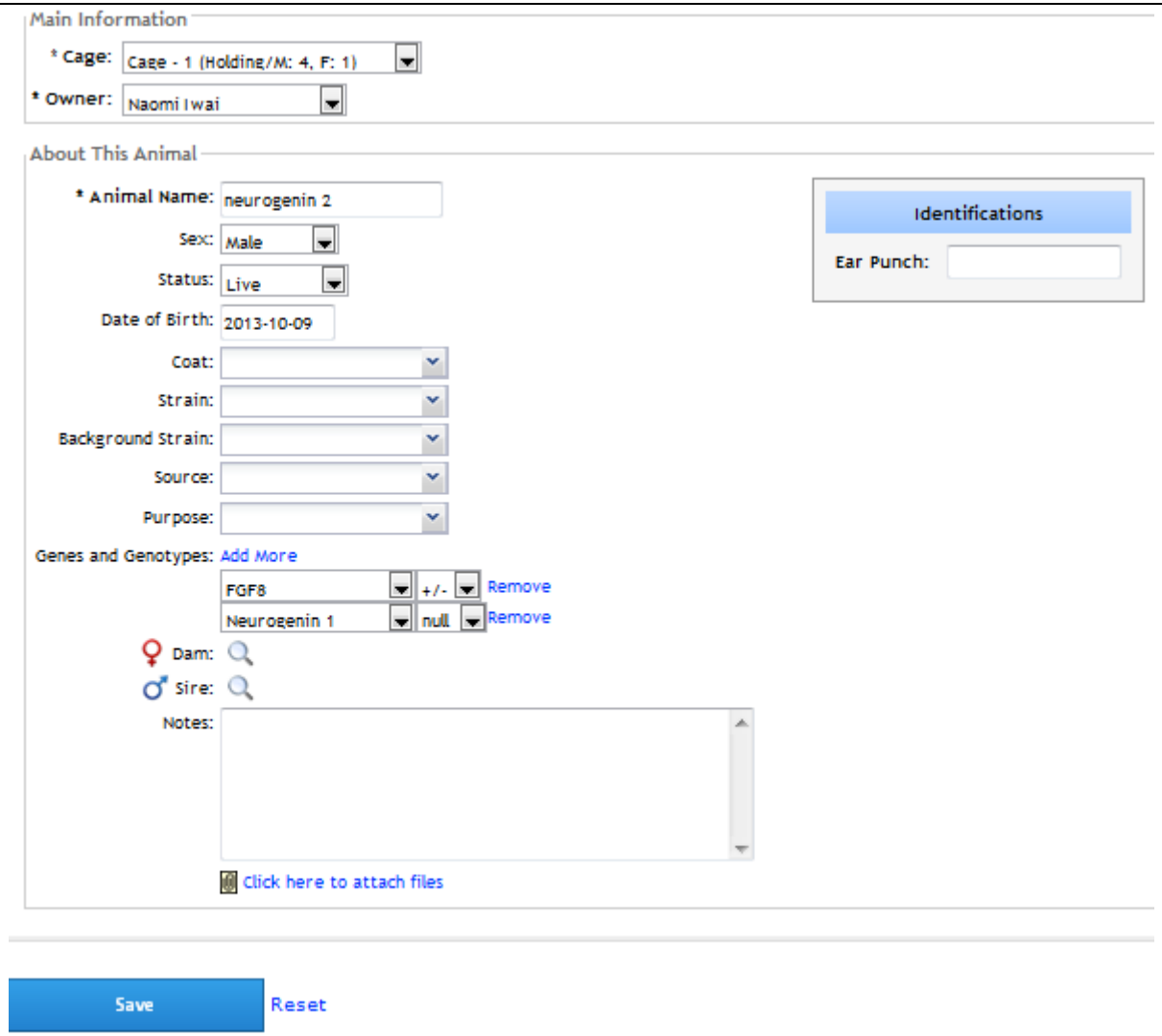
Click on Update button.

Note: you can also click on the animal name (which takes you to the animal information window) and click on Edit


Cages
Animals
Add New Animal
Add Multiple Animals
Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (10)
Selected Animals (0)
List of Animals (Displaying 1 - 10 of 10 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
No.
Animal Name
Status
Sex
Genes & Genotypes
1 neurogenin 1 Live M FGF8: +/+; Neurogenin 1: het 2013-09
2 neurogenin 2 Live M FGF8: +/-; Neurogenin 1: null 2013-09
3 neurogenin 3 Live M FGF8: +/-; Neurogenin 1: null 2013-09
4 neurogenin 4 Live M FGF8: -/-; Neurogenin 1: het 2013-

Animal Information window displays.

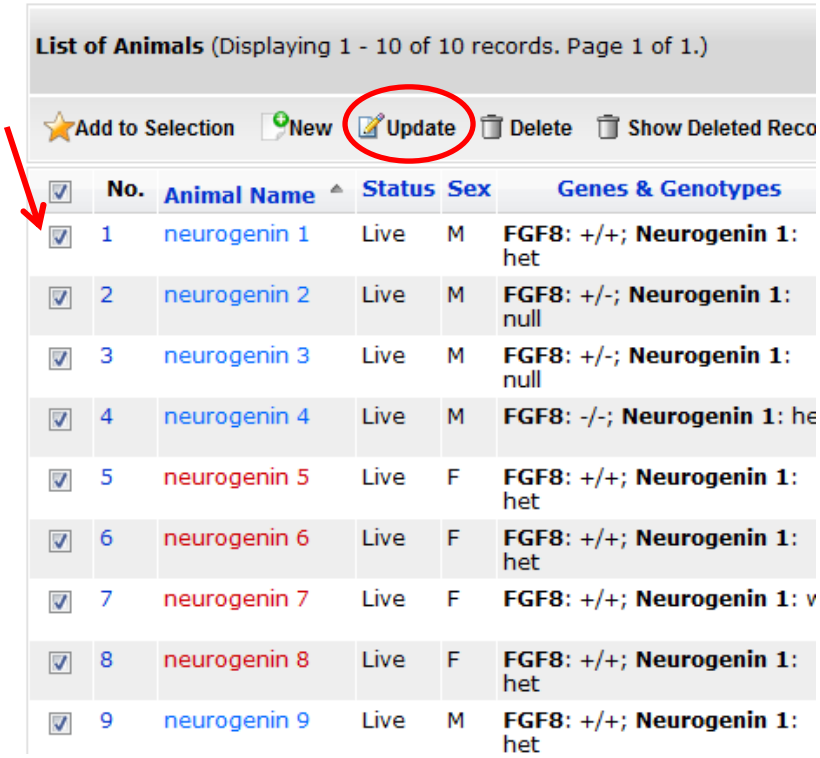
Make your updates and click Save.

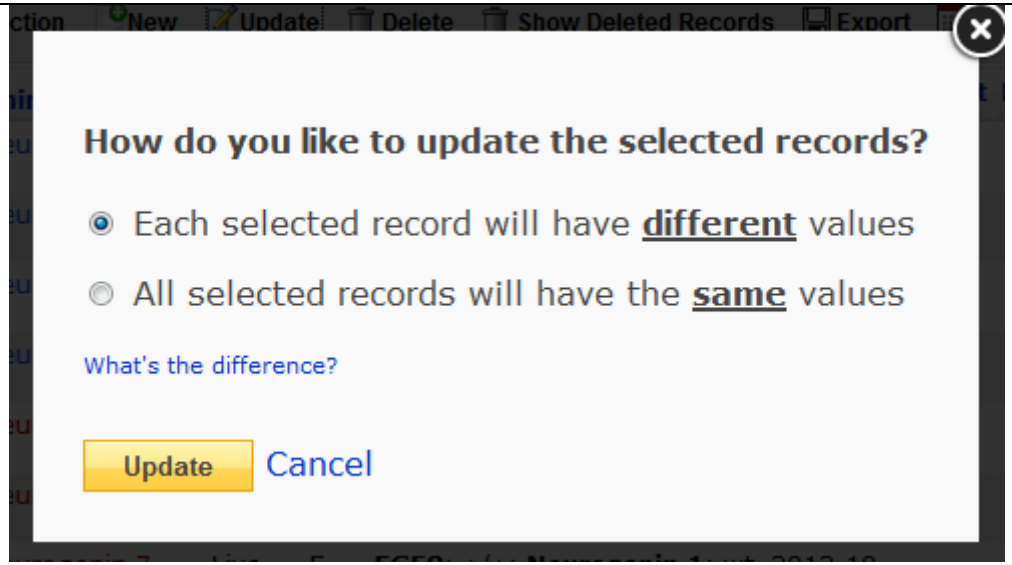


Update Multiple Animals:

In Review Animals List, select the animals that you want to update by checking the check boxes.

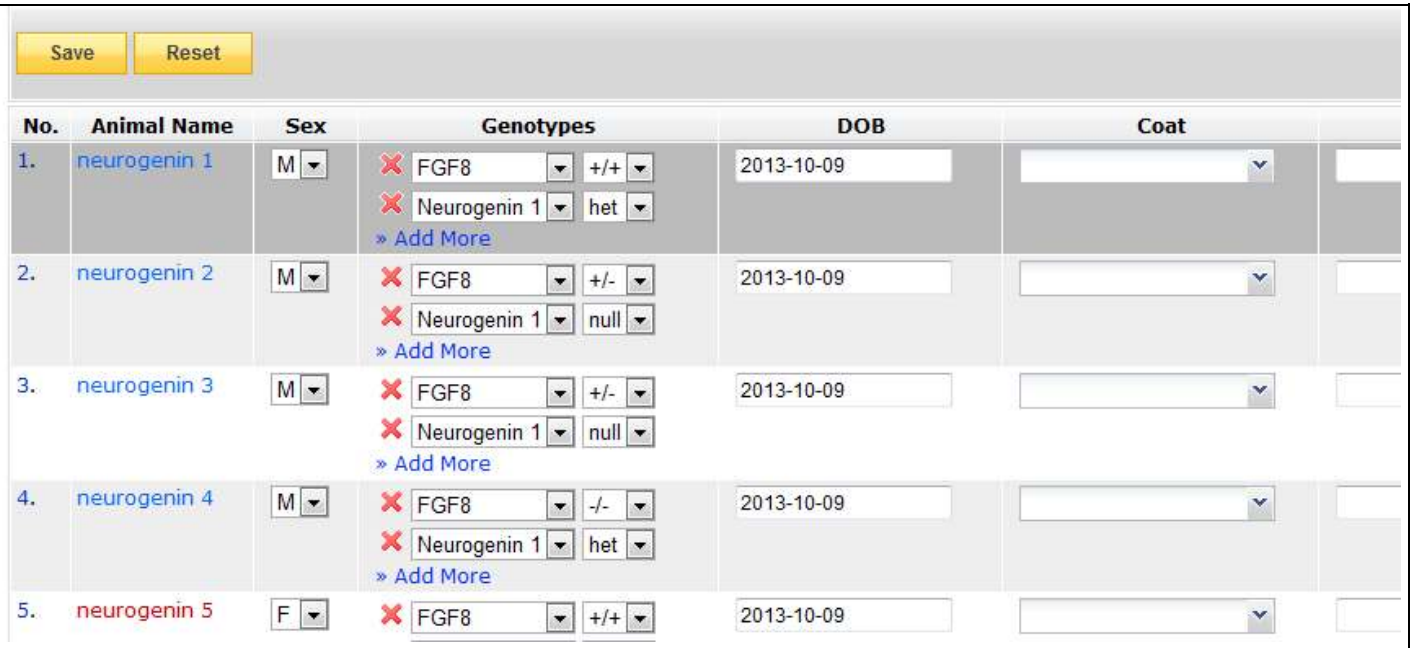
Click on Update button.


List of Animals (Displaying 1 - 10 of 10 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Reco
No.
Animal Name
Status
Sex
Genes & Genotypes
1 neurogenin 1 Live M FGF8: +/+; Neurogenin 1: het
2 neurogenin 2 Live M FGF8: +/-; Neurogenin 1: null
3 neurogenin 3 Live M FGF8: +/-; Neurogenin 1: null
4 neurogenin 4 Live M FGF8: -/-; Neurogenin 1: he
5 neurogenin 5 Live F FGF8: +/+; Neurogenin 1: het
6 neurogenin 6 Live F FGF8: +/+; Neurogenin 1: het
7 neurogenin 7 Live F FGF8: +/+; Neurogenin 1: v
8 neurogenin 8 Live F FGF8: +/+; Neurogenin 1: het
9 neurogenin 9 Live M FGF8: +/+; Neurogenin 1: het

Message displays: **How do you like to update the selected records?** If you want to make different updates for each record, choose the first option 'Each selected record will have different values'. If you want to make the same update for all selected records, choose the second option 'All selected records will have the same values'. **Choose an option and click on Update**	

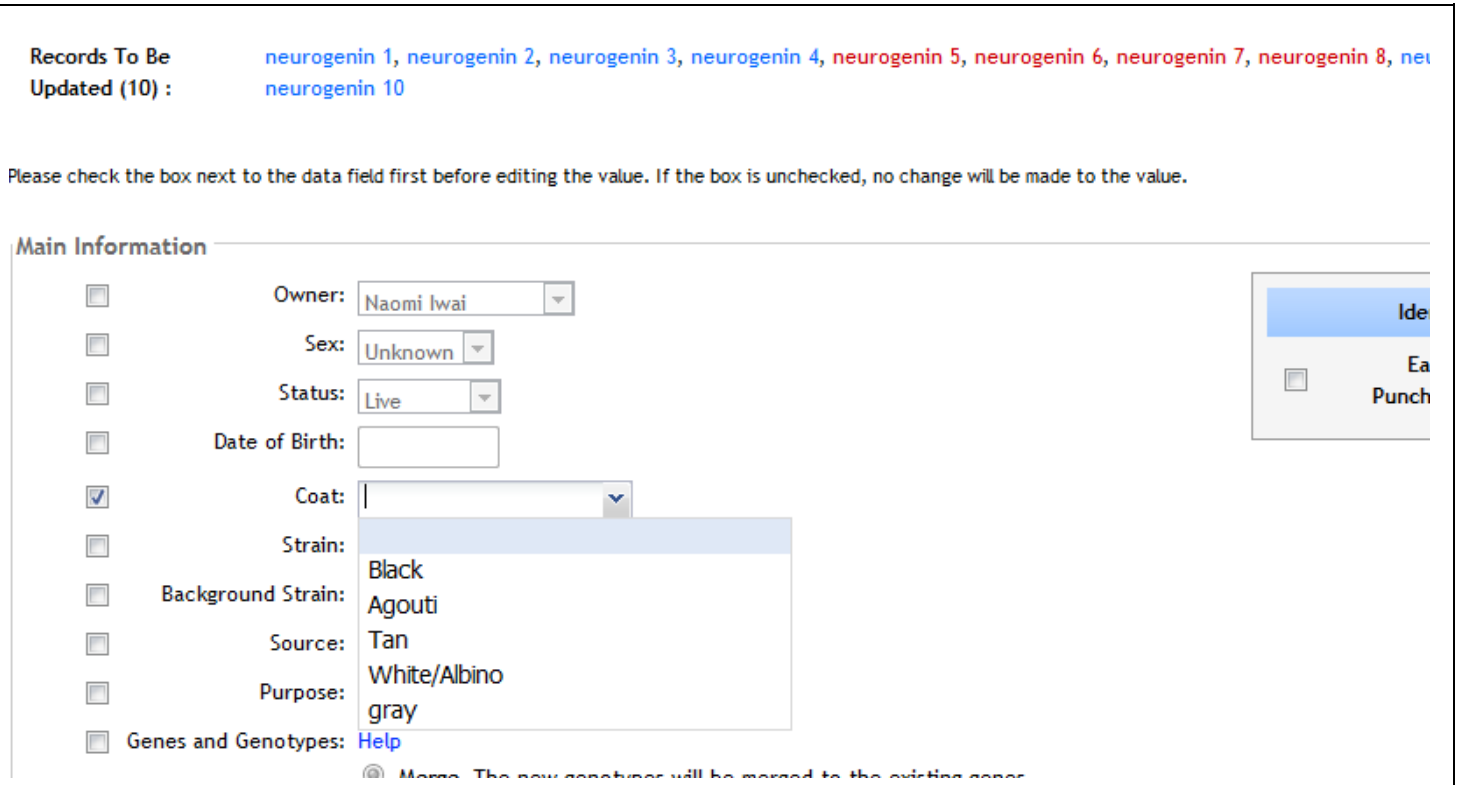
'Each selected record will have different values' option:

You can make different updates for each animal and field


Save
Reset
No.
Animal Name
Sex
Genotypes
DOB
Coat
1. neurogenin 1 M FGF8 +/+ Neurogenin 1 het » Add More 2013-10-09
2. neurogenin 2 M FGF8 +/- Neurogenin 1 null » Add More 2013-10-09
3. neurogenin 3 M FGF8 +/- Neurogenin 1 null » Add More 2013-10-09
4. neurogenin 4 M FGF8 -/- Neurogenin 1 het » Add More 2013-10-09
5. neurogenin 5 F FGF8 +/+ 2013-10-09

'All selected records will have the same values' option:

Check the check box for the field you want to update. In this example, I checked Coat. If I choose Black and save, all selected records (displayed on top) will be changed to coat color Black.


Records To Be Updated (10) :
neurogenin 1, neurogenin 2, neurogenin 3, neurogenin 4, neurogenin 5, neurogenin 6, neurogenin 7, neurogenin 8, neu
neurogenin 10
Please check the box next to the data field first before editing the value. If the box is unchecked, no change will be made to the value.
Main Information
Owner: Naomi Iwai
Sex: Unknown
Status: Live
Date of Birth:
Coat:
Strain:
Background Strain:
Source:
Purpose:
Genes and Genotypes: Help
Black
Agouti
Tan
White/Albino
gray

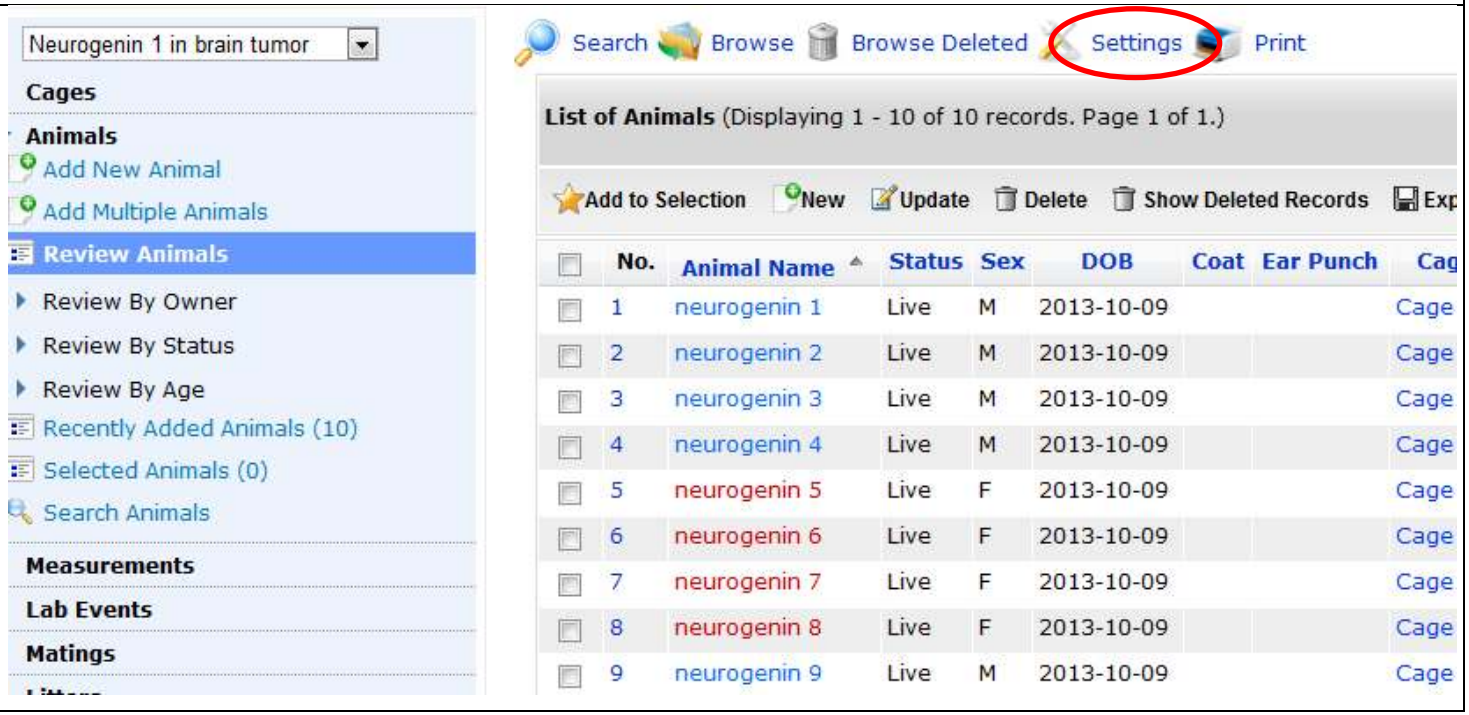
Note: To Update Multiple Cages, there is only one option available: All selected records will have the same values.

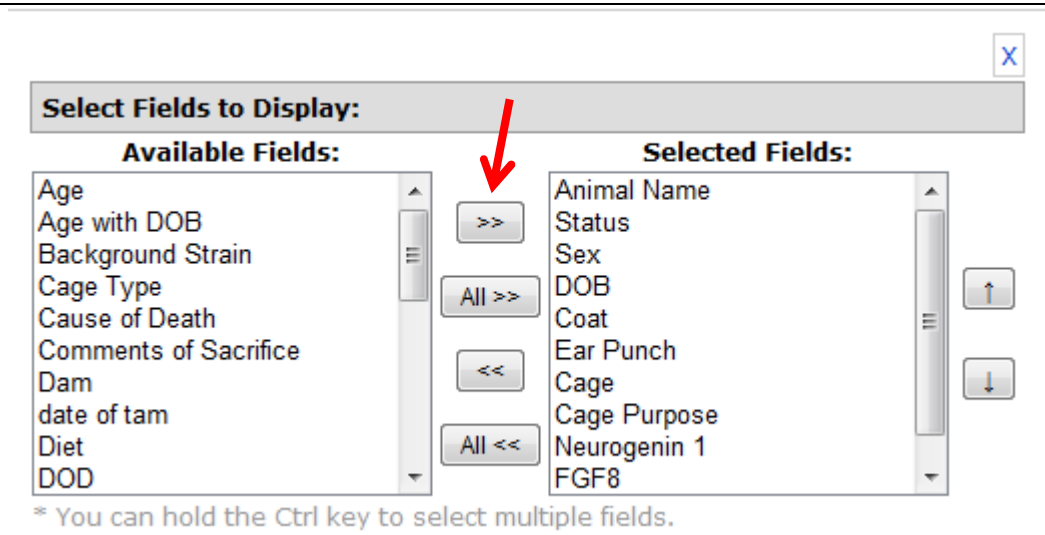
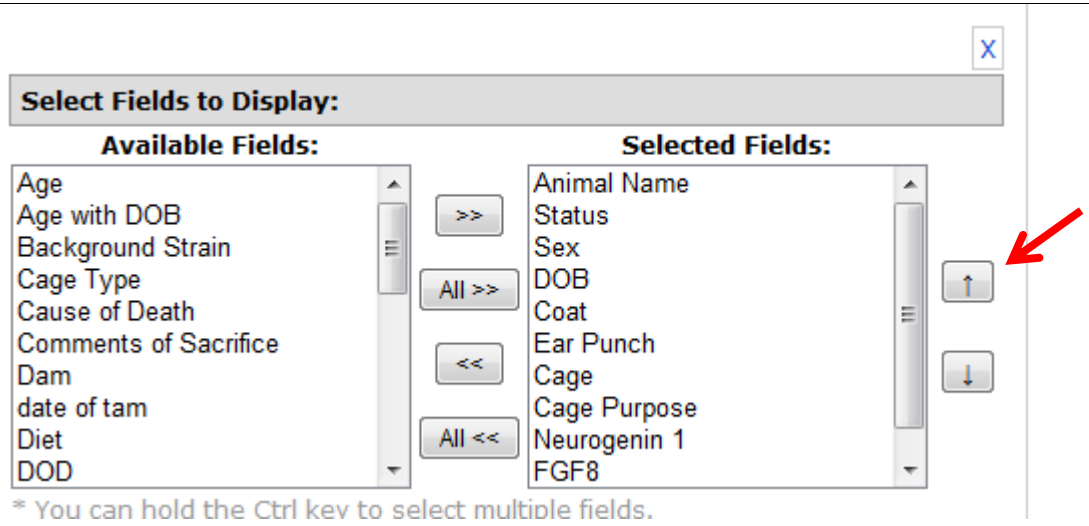
Note: Bulk-updates are not available for any other records such as matings and litters. You will have to choose one record and make an update.

Set Up Column View

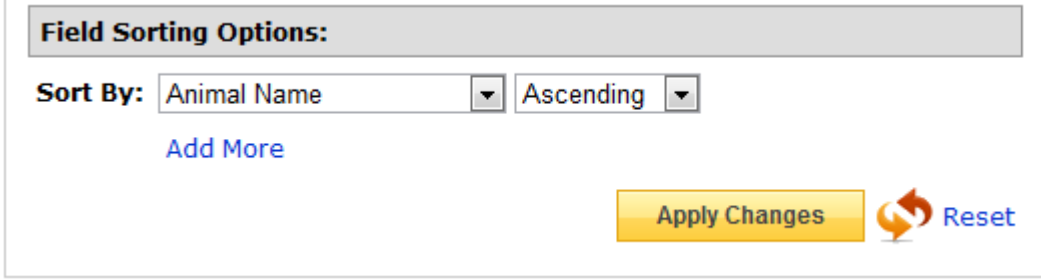
You can choose what columns to display in your Review Animals List. The following instructions apply to all Lists, such as Review Cages List, Review Matings List, Review Litters List, etc.

1. Click on Settings button



2. Select the fields that you want to see as columns in the list Use the arrowheads to move fields back and forth between the Available Fields list and the Selected Fields list.	
3. In Selected Fields list, arrange the order of display Use the arrows to move fields up and down (when you move a field up, the column will move to the left in the List of Animals)	

4. **Set up how you want to sort the list**
5. **Click on Apply Changes**



6. **You should see the List of Animals with your preferred columns and column order**

This column view will be saved, even after you log out.

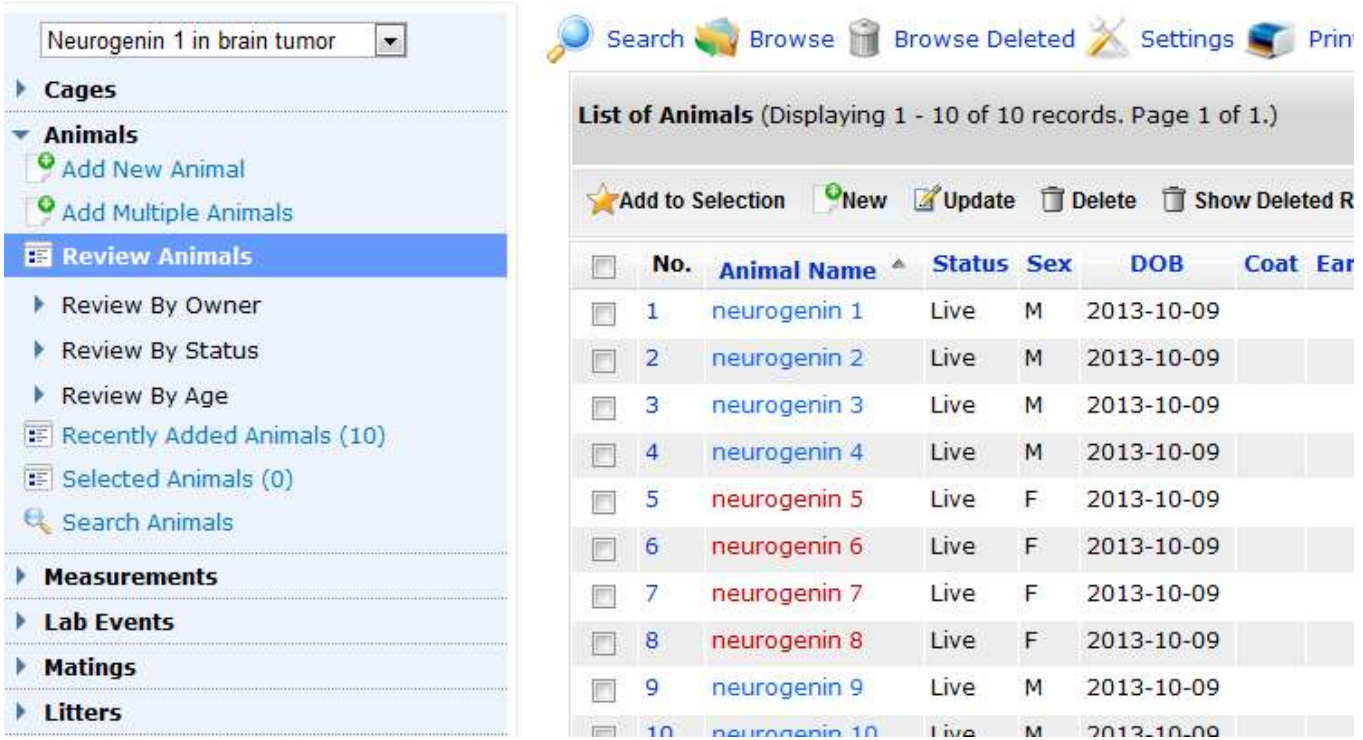
No.	Animal Name	Status	Sex	DOB	Coat	Ear Punch	Cage	Cage Purpose	Neurogenin 1	FGF8	
1	neurogenin 1	Live	M	2013-10-09			Cage - 1	Holding	het	+/+	bra
2	neurogenin 2	Live	M	2013-10-09			Cage - 1	Holding	null	+/-	bra
3	neurogenin 3	Live	M	2013-10-09			Cage - 1	Holding	null	+/-	bra
4	neurogenin 4	Live	M	2013-10-09			Cage - 1	Holding	het	-/-	bra
5	neurogenin 5	Live	F	2013-10-09			Cage - 1	Holding	het	+/+	bra
6	neurogenin 6	Live	F	2013-10-09			Cage - 2	Holding	het	+/+	bra
7	neurogenin 7	Live	F	2013-10-09			Cage - 2	Holding	wt	+/+	bra
8	neurogenin 8	Live	F	2013-10-09			Cage - 2	Holding	het	+/+	bra
9	neurogenin 9	Live	M	2013-10-09			Cage - 2	Holding	het	+/+	bra

Search Records and Save Searches

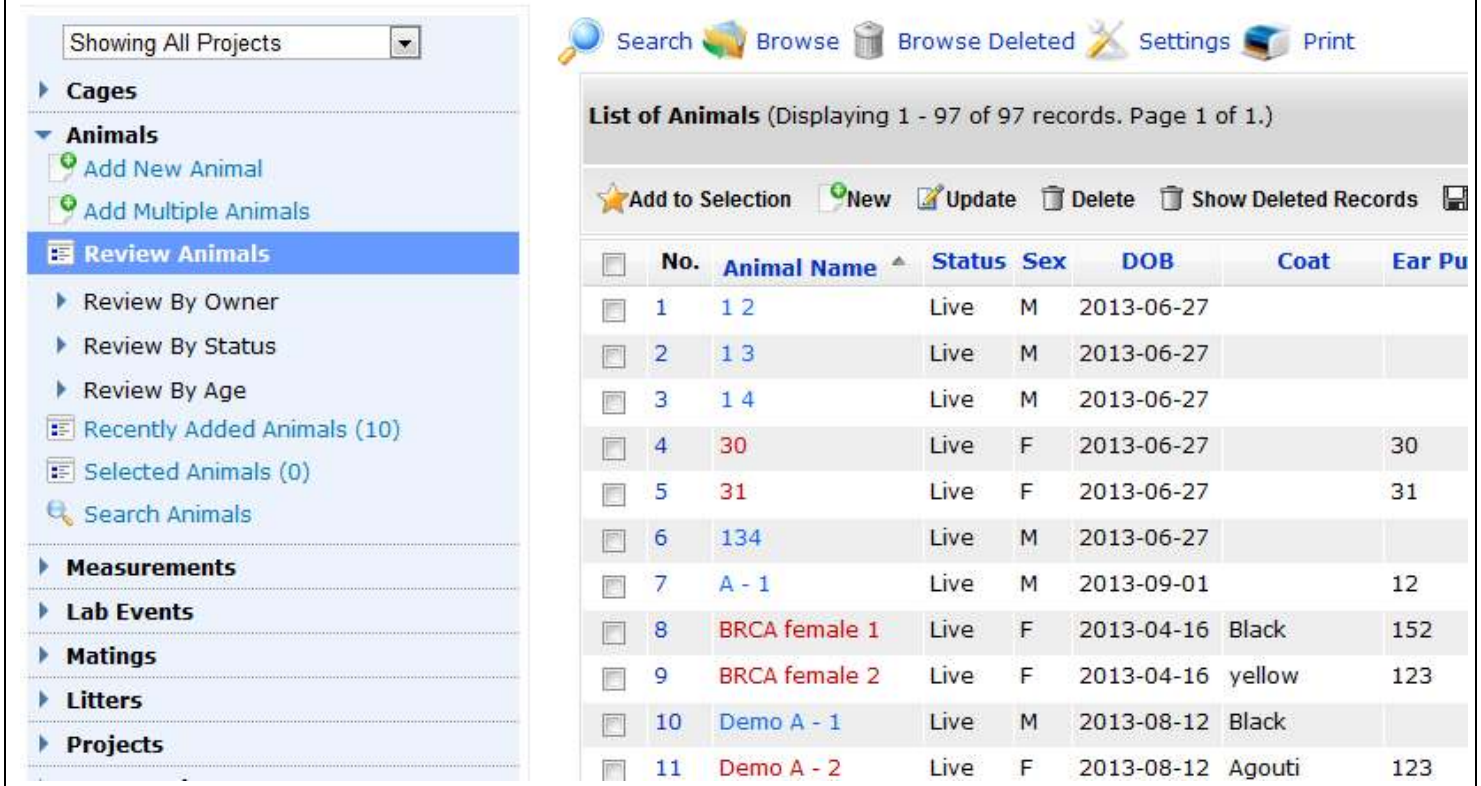
The following instructions apply to searches in all Lists, such as Review Cages List, Review Matings List, Review Litters List, etc.

1. Select Project

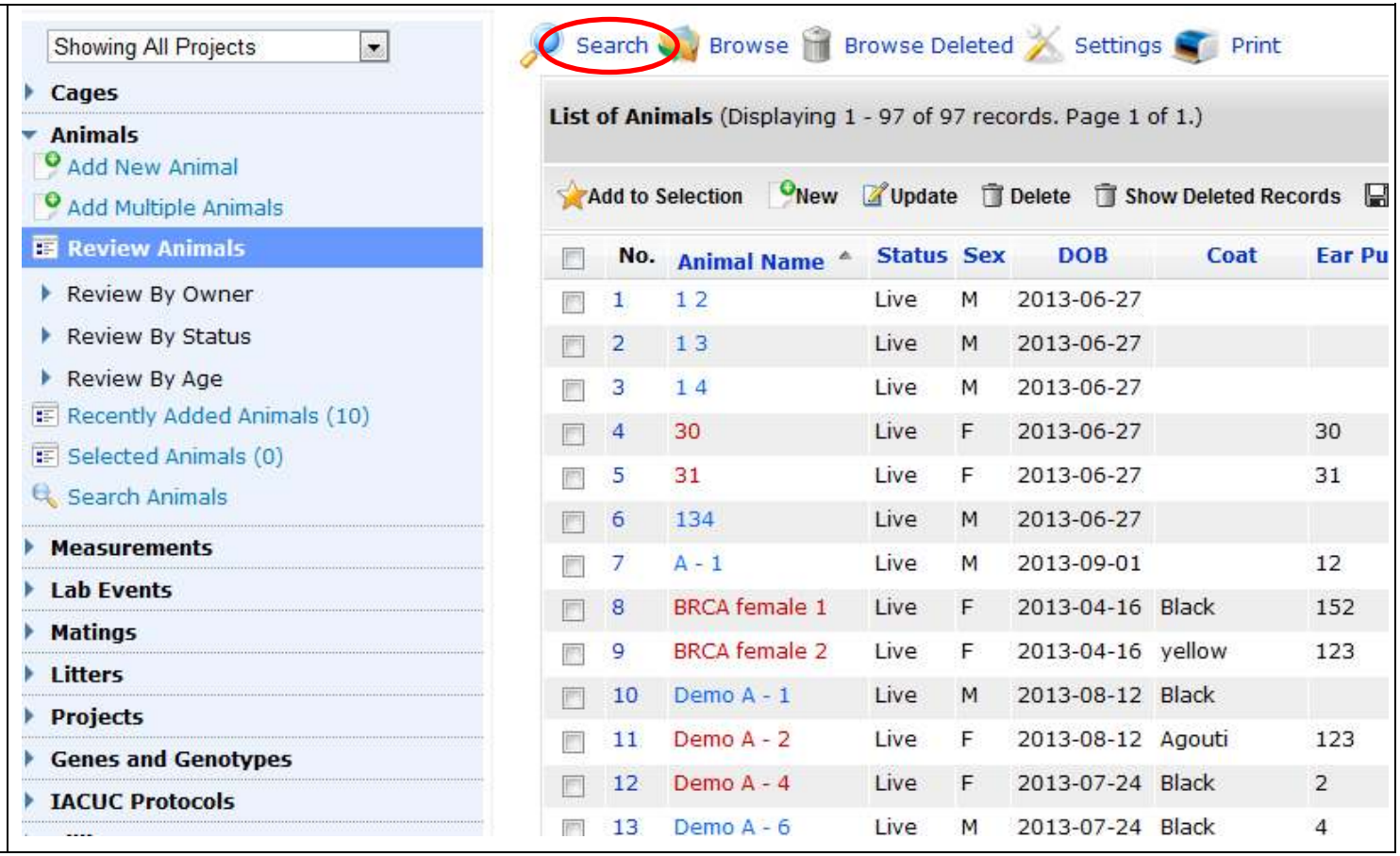
Select the Project in which you want to search



You can also select Showing All Projects, and the search will apply to all Projects

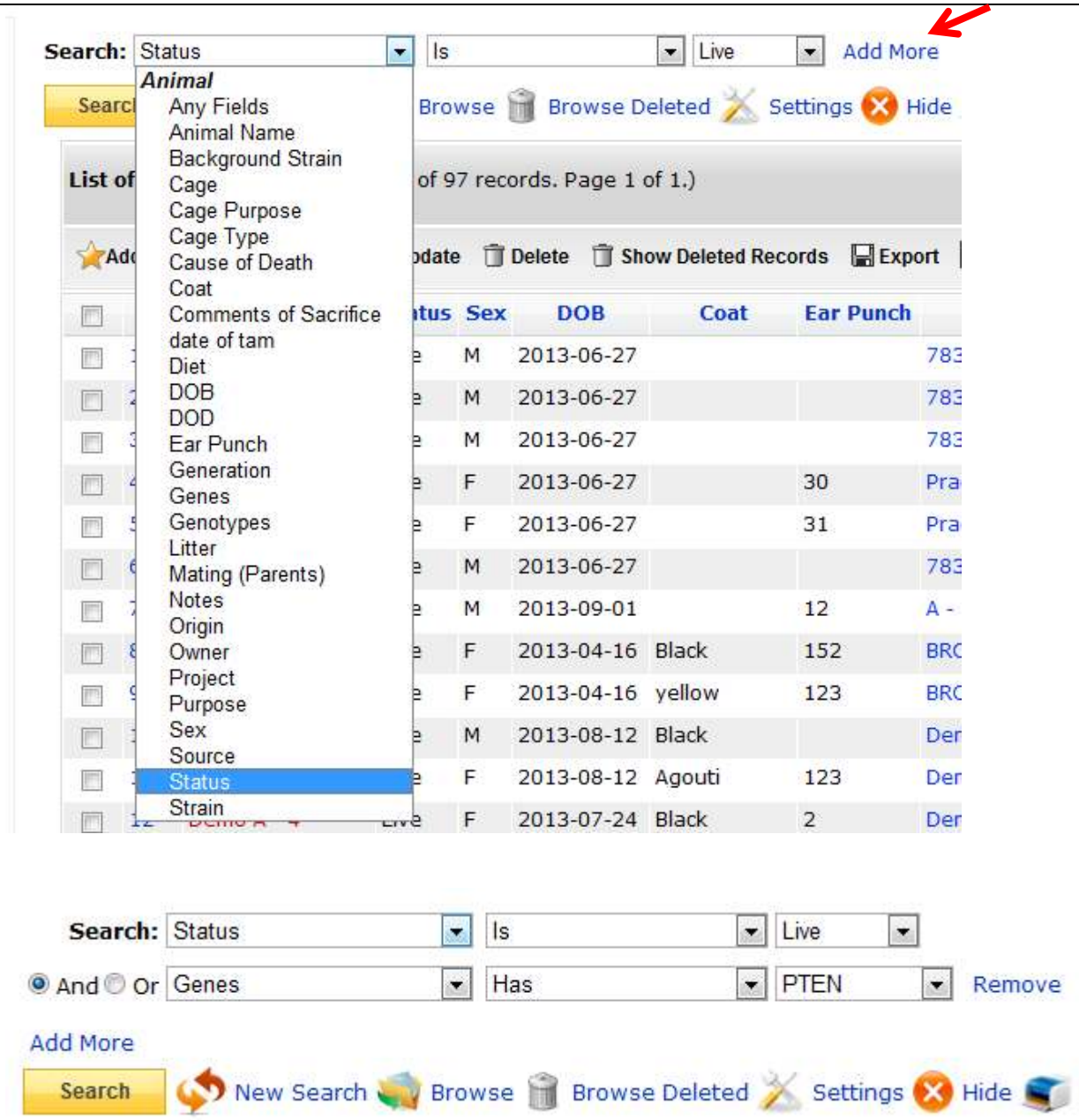

Showing All Projects
Cages
Animals
Add New Animal
Add Multiple Animals
Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (10)
Selected Animals (0)
Search Animals
Measurements
Lab Events
Matings
Litters
Projects
Search
Browse
Browse Deleted
Settings
Print
List of Animals (Displaying 1 - 97 of 97 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
No.
Animal Name
Status
Sex
DOB
Coat
Ear Pu
1 1 2 Live M 2013-06-27
2 1 3 Live M 2013-06-27
3 1 4 Live M 2013-06-27
4 30 Live F 2013-06-27 30
5 31 Live F 2013-06-27 31
6 134 Live M 2013-06-27
7 A - 1 Live M 2013-09-01 12
8 BRCA female 1 Live F 2013-04-16 Black 152
9 BRCA female 2 Live F 2013-04-16 yellow 123
10 Demo A - 1 Live M 2013-08-12 Black
11 Demo A - 2 Live F 2013-08-12 Agouti 123

2. Click on Search button


Showing All Projects
Cages
Animals
Add New Animal
Add Multiple Animals
Review Animals
Review By Owner
Review By Status
Review By Age
Recently Added Animals (10)
Selected Animals (0)
Search Animals
Measurements
Lab Events
Matings
Litters
Projects
Genes and Genotypes
IACUC Protocols
Search
Browse
Browse Deleted
Settings
Print
List of Animals (Displaying 1 - 97 of 97 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
No. Animal Name Status Sex DOB Coat Ear Pu
1 1 2 Live M 2013-06-27
2 1 3 Live M 2013-06-27
3 1 4 Live M 2013-06-27
4 30 Live F 2013-06-27 30
5 31 Live F 2013-06-27 31
6 134 Live M 2013-06-27
7 A - 1 Live M 2013-09-01 12
8 BRCA female 1 Live F 2013-04-16 Black 152
9 BRCA female 2 Live F 2013-04-16 yellow 123
10 Demo A - 1 Live M 2013-08-12 Black
11 Demo A - 2 Live F 2013-08-12 Agouti 123
12 Demo A - 4 Live F 2013-07-24 Black 2
13 Demo A - 6 Live M 2013-07-24 Black 4

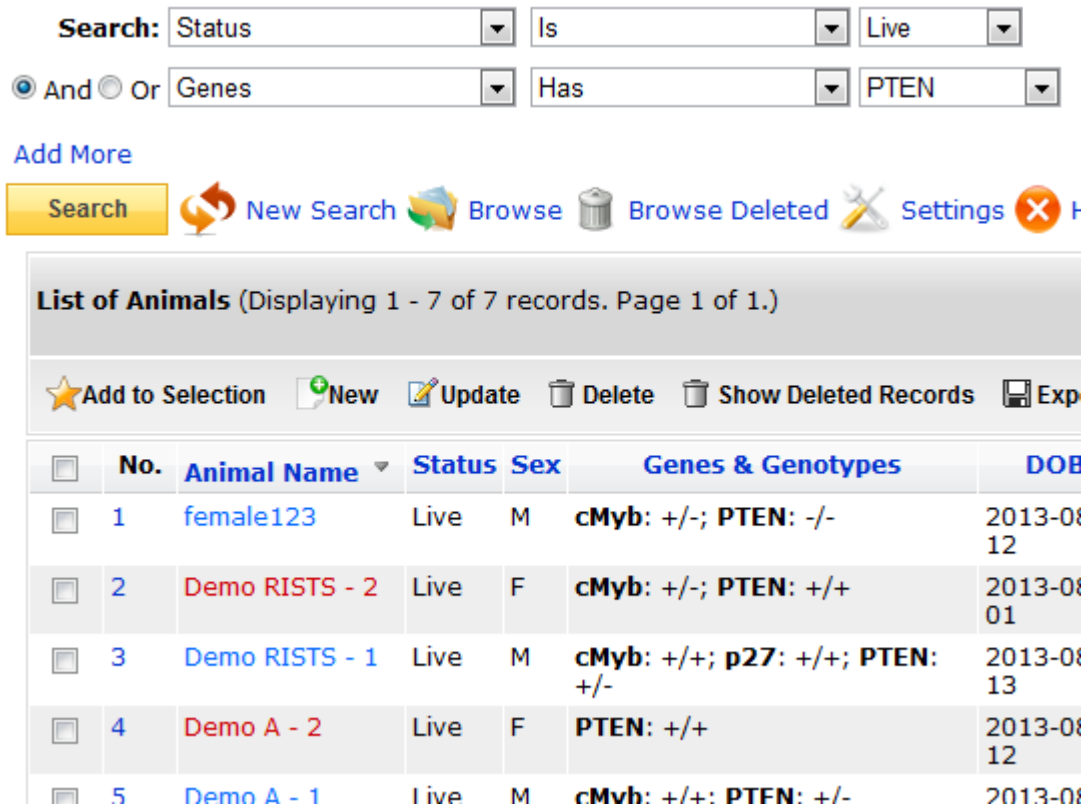
3. Set up the search criteria

If you have more than one criteria, click on Add More



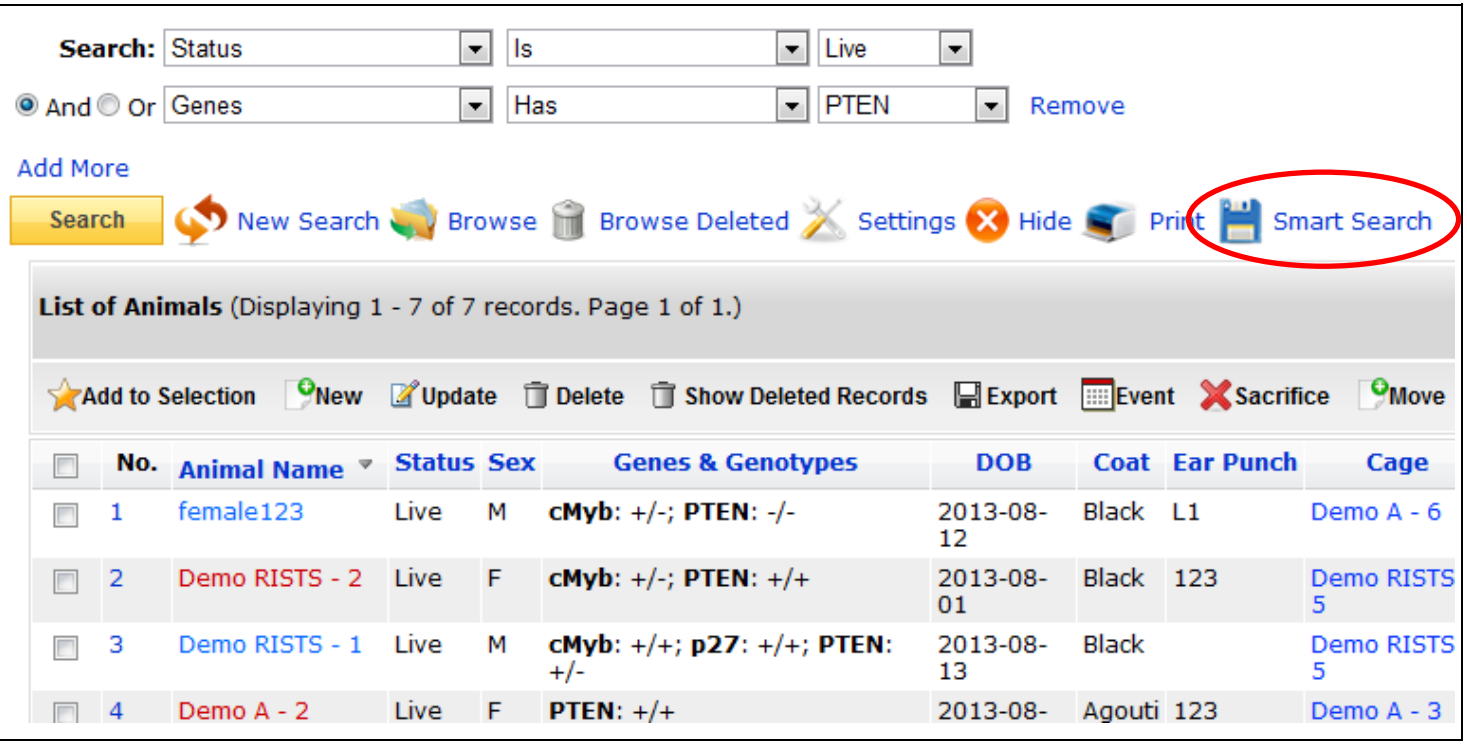
4. Click on Search

5. Search results will display

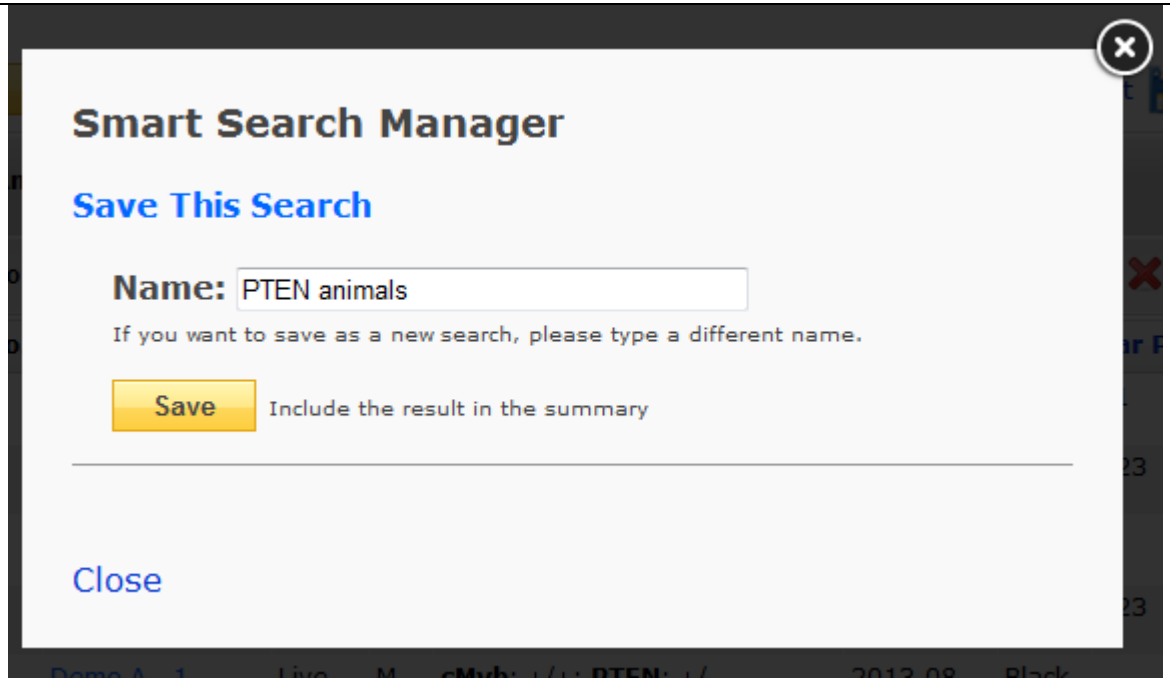

Search: Status Is Live
And Or Genes Has PTEN
Add More
Search
New Search
Browse
Browse Deleted
Settings
List of Animals (Displaying 1 - 7 of 7 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Show Deleted Records
No.
Animal Name
Status
Sex
Genes & Genotypes
DOB
1 female123 Live M cMyb: +/-; PTEN: -/- 2013-08-12
2 Demo RISTS - 2 Live F cMyb: +/-; PTEN: +/+ 2013-08-01
3 Demo RISTS - 1 Live M cMyb: +/+; p27: +/+; PTEN: +/- 2013-08-13
4 Demo A - 2 Live F PTEN: +/+ 2013-08-12
5 Demo A - 1 Live M cMyb: +/+; PTEN: +/- 2013-08

6. To save this Search, click on Smart Search

This is for searches that you perform frequently



7. **Smart Search Manager window displays**
8. **Enter a name for the Search**
9. **Click Save**


Smart Search Manager
Save This Search
Name: PTEN animals
If you want to save as a new search, please type a different name.
Save
Include the result in the summary
Close

10. In the future when you want to perform the same search, click on Saved Searches in left hand menu

11. Click on the search and the results will be displayed at once

Note: you can rename or delete a saved search in the Smart Search window

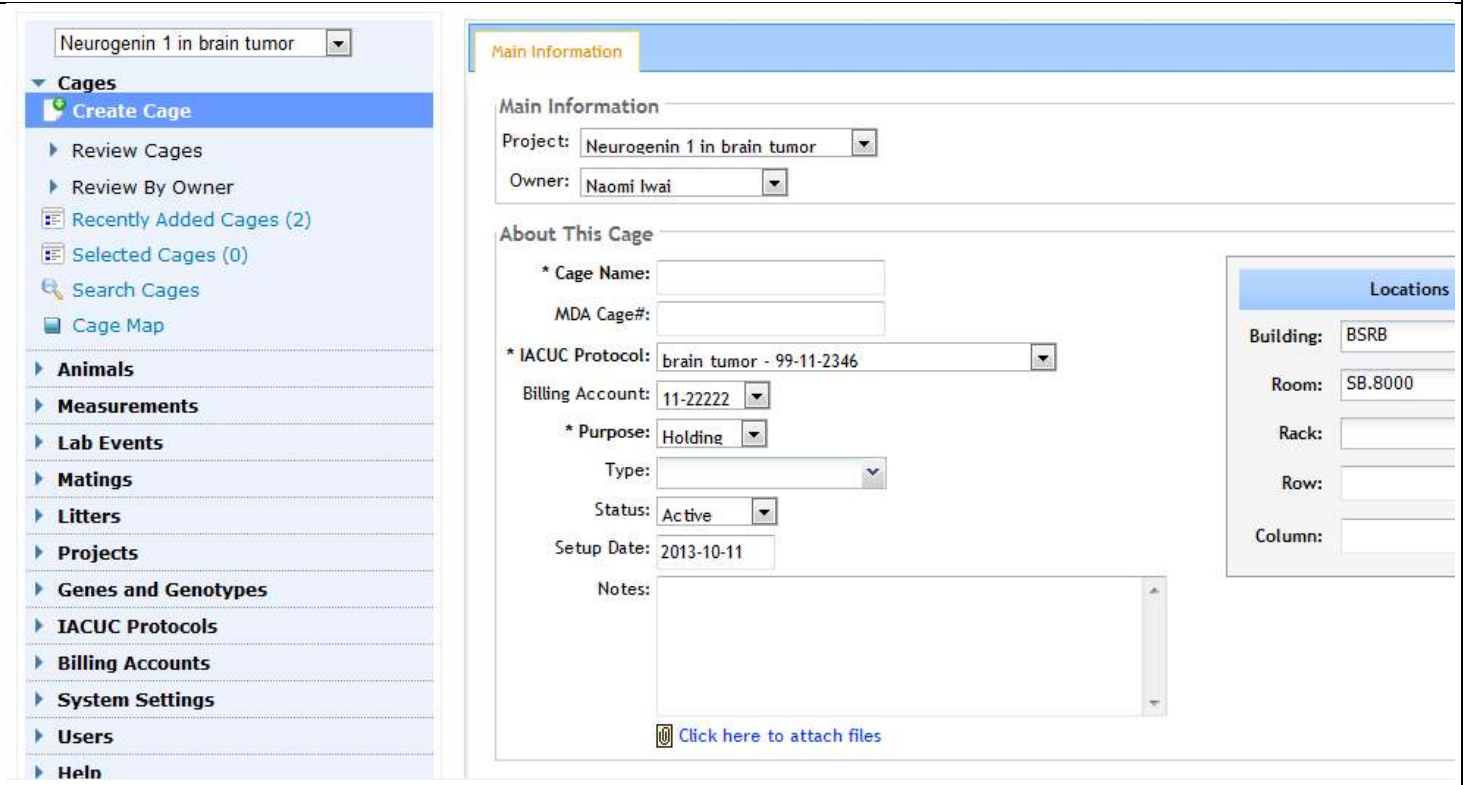
Section 6Cages

Create Cage

You can create a cage and later move animals into this cage.

1. In left hand menu, select Cages > Create Cage

Note: Make sure a Project is selected



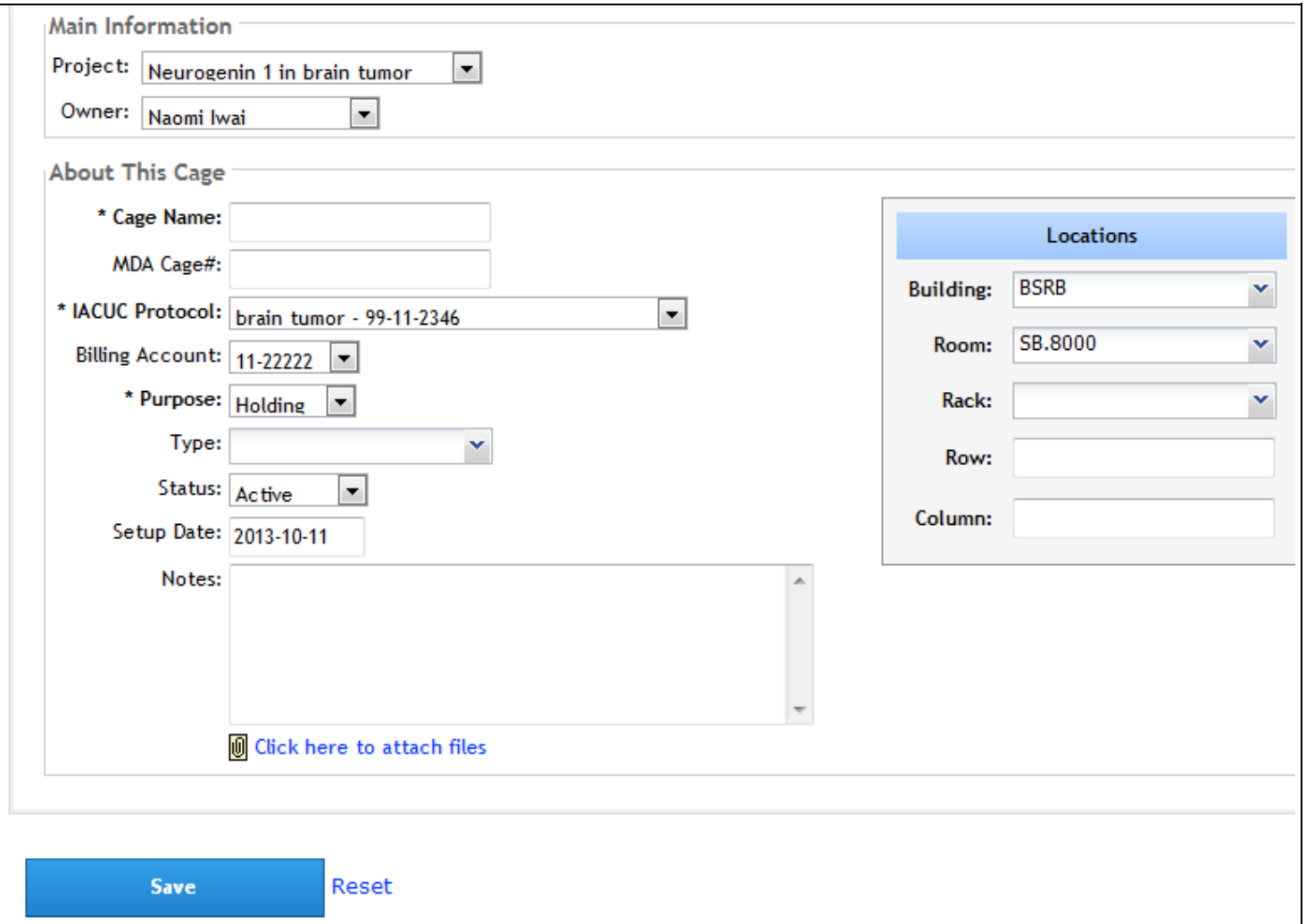
2. **Create Cage window displays**
3. **Enter all mandatory information such as Cage Name, IACUC Protocol, Purpose (of cage) and non-mandatory information if applicable.**

A cage name is mandatory and has to be unique in the lab (there cannot be two identical cage names in the same lab).

For Smithville users, Billing Account may be mandatory too, depending on your setup.

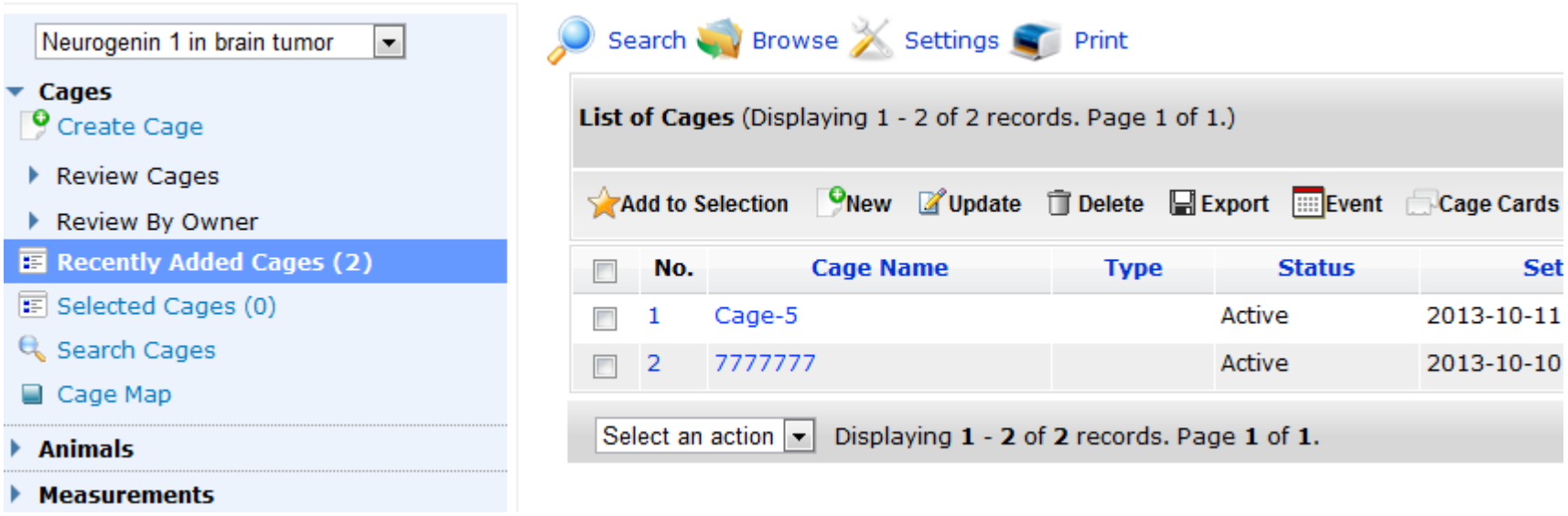
Note that some information such as IACUC Protocol and Cage Locations are already populated based on your default settings.

4. **Click Save**



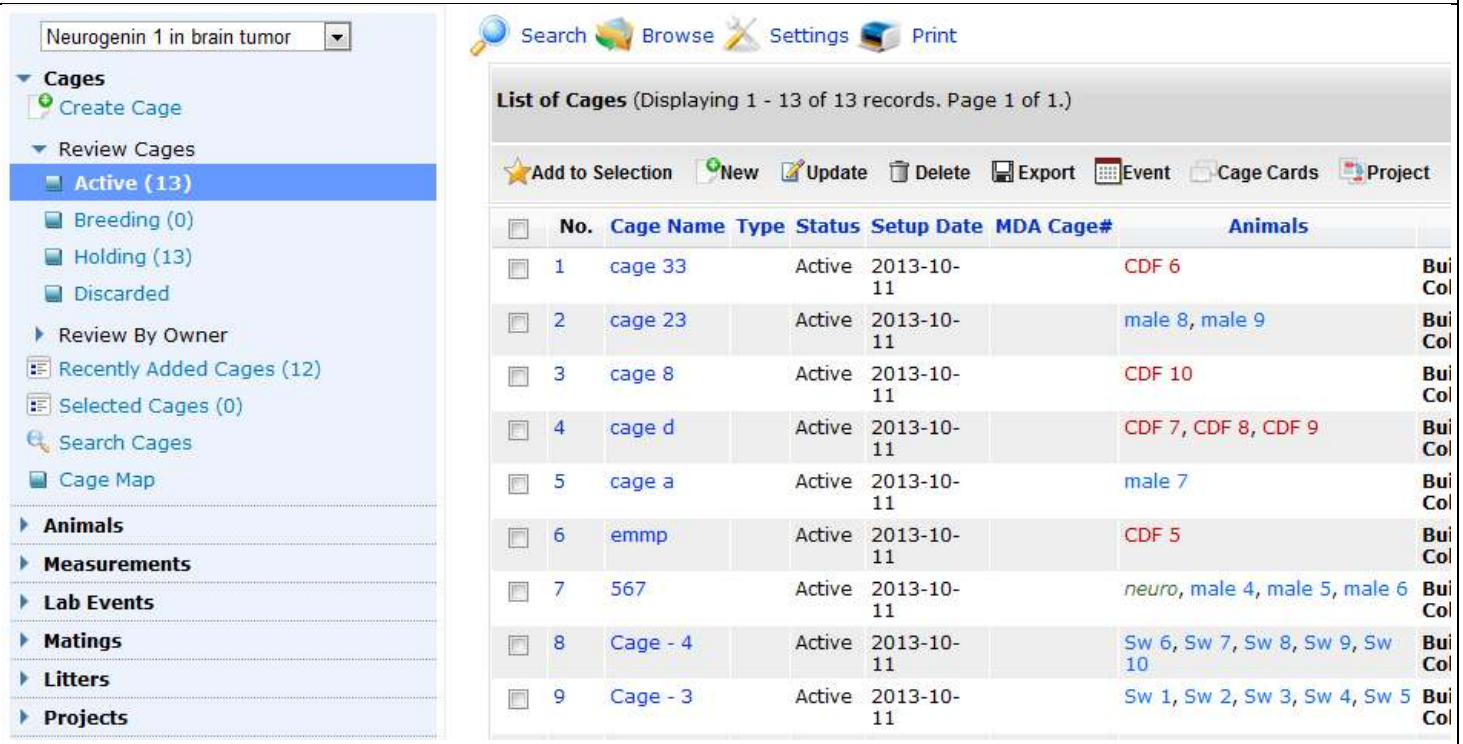
Recently Added Cages

In left hand menu, Cages > Recently Added Cages, you can view cages that were created in the last 24 hours:



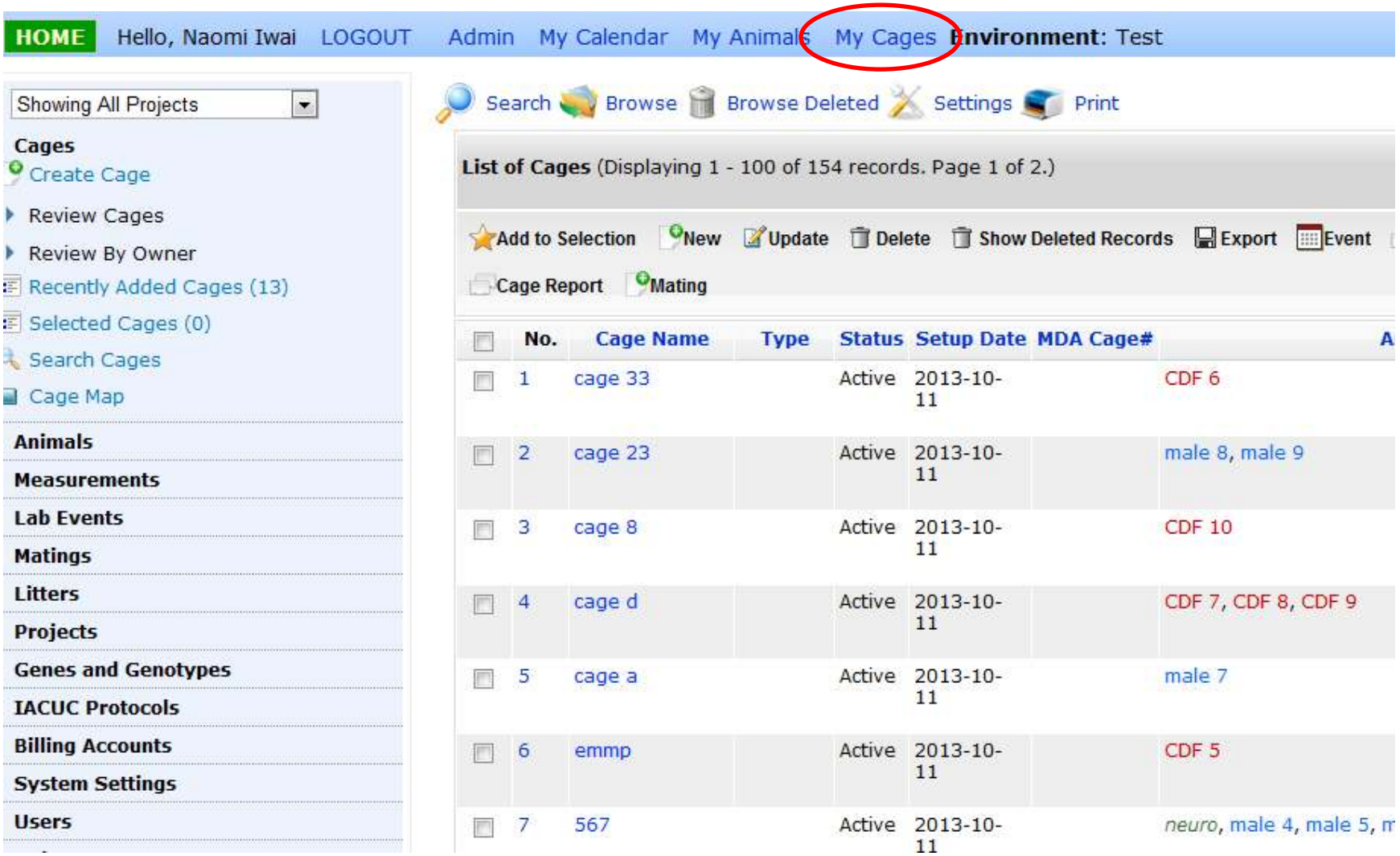
Review Cages

In left hand menu, select Cages > Review Cages

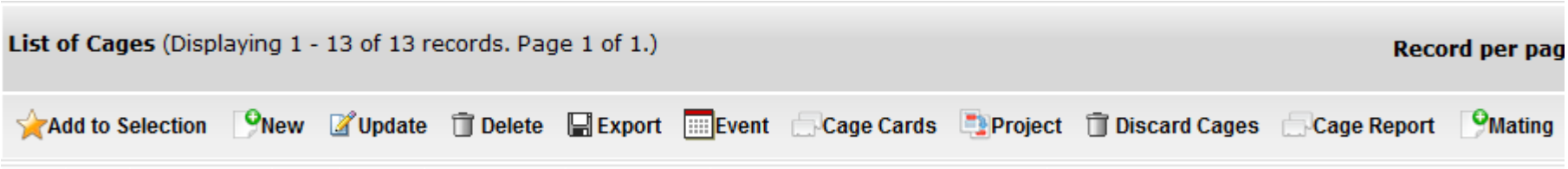

Neurogenin 1 in brain tumor
Cages
Create Cage
Review Cages
Active (13)
Breeding (0)
Holding (13)
Discarded
Review By Owner
Recently Added Cages (12)
Selected Cages (0)
Search Cages
Cage Map
Animals
Measurements
Lab Events
Matings
Litters
Projects
Search
Browse
Settings
Print
List of Cages (Displaying 1 - 13 of 13 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Export
Event
Cage Cards
Project
No. Cage Name Type Status Setup Date MDA Cage# Animals
1 cage 33 Active 2013-10-11 CDF 6
2 cage 23 Active 2013-10-11 male 8, male 9
3 cage 8 Active 2013-10-11 CDF 10
4 cage d Active 2013-10-11 CDF 7, CDF 8, CDF 9
5 cage a Active 2013-10-11 male 7
6 emmp Active 2013-10-11 CDF 5
7 567 Active 2013-10-11 neuro, male 4, male 5, male 6
8 Cage - 4 Active 2013-10-11 Sw 6, Sw 7, Sw 8, Sw 9, Sw 10
9 Cage - 3 Active 2013-10-11 Sw 1, Sw 2, Sw 3, Sw 4, Sw 5

My Cages

In top menu bar, there is a shortcut button called My Cages. If you click on this, all your cages (in all Projects) will be displayed in one list:



Shortcut buttons for Review Cages List:



Add to Selection: see Section 5 Animals >The Animal "Shopping Cart"

New: Create Cage button (see above Create Cage)

Update: Update Cage Information button

Delete: Delete Cage button (see Section 5 Animals > Delete Animals for more information)

Export: use this button to export your records to Excel

Event: see Section 8 Lab Events

Cage Cards: see below Cage Cards

Project: Move Cages between Projects (see below Move Cage to Different Project)

Discard Cages: see below Discard Cages

Cage Report: see below Cage Report

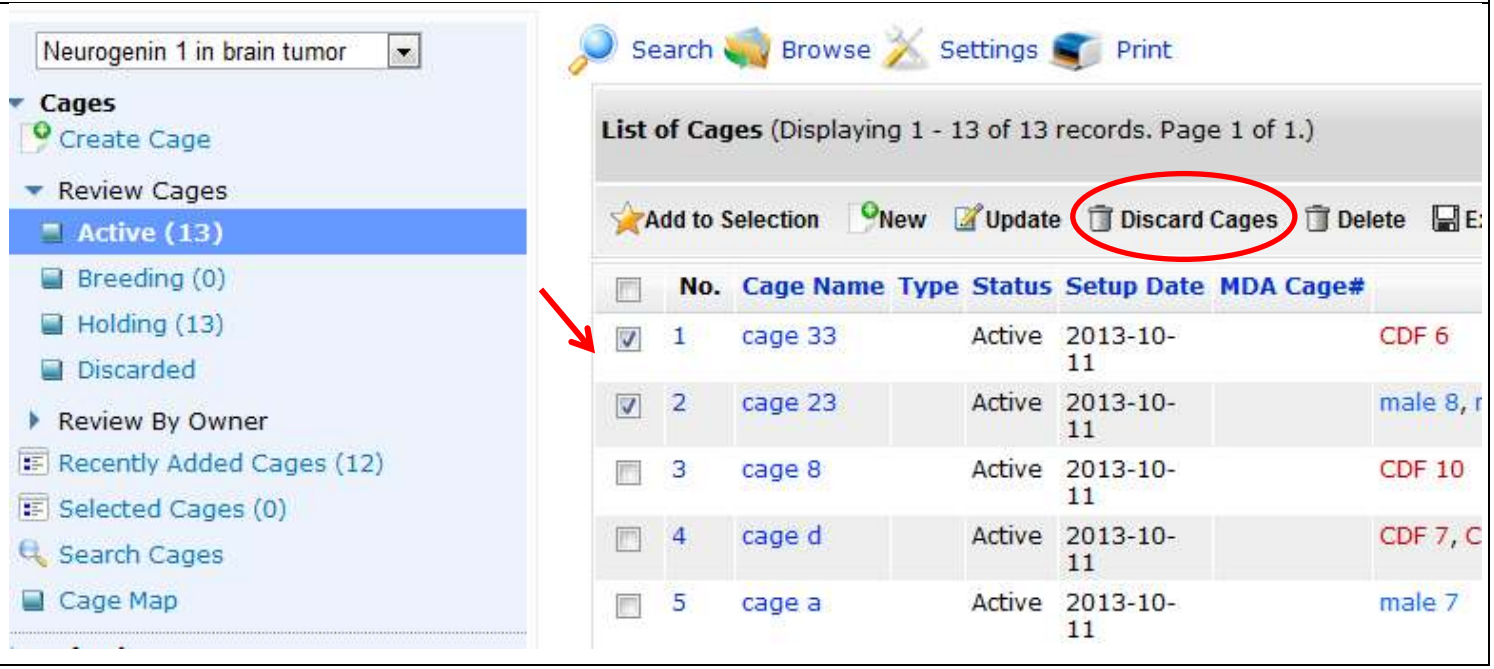
Mating: see Section 7 Matings and Litters

Note: you can change the order of these buttons by dragging them left and right.

Discard Cages

When you are done with a cage, discard the cage (the status of a cage can be either Active or Discarded). Do not delete a cage unless it is an erroneous record.

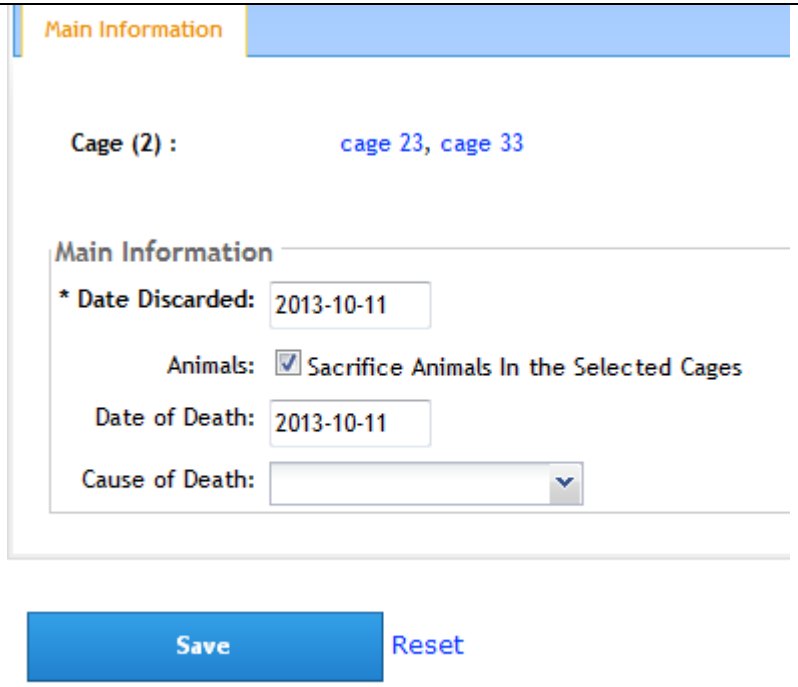
1. **In Review Cages List, select the cages that you want to discard by checking the check boxes**
2. **Click on Discard Cages**



3. In Discard Cage window, enter Date Discarded

Note: by default, if there are animals in the cage, they will be automatically sacrificed. If you do not want to sacrifice the animals, uncheck the check box Sacrifice Animals in the Selected Cages.

4. Click Save



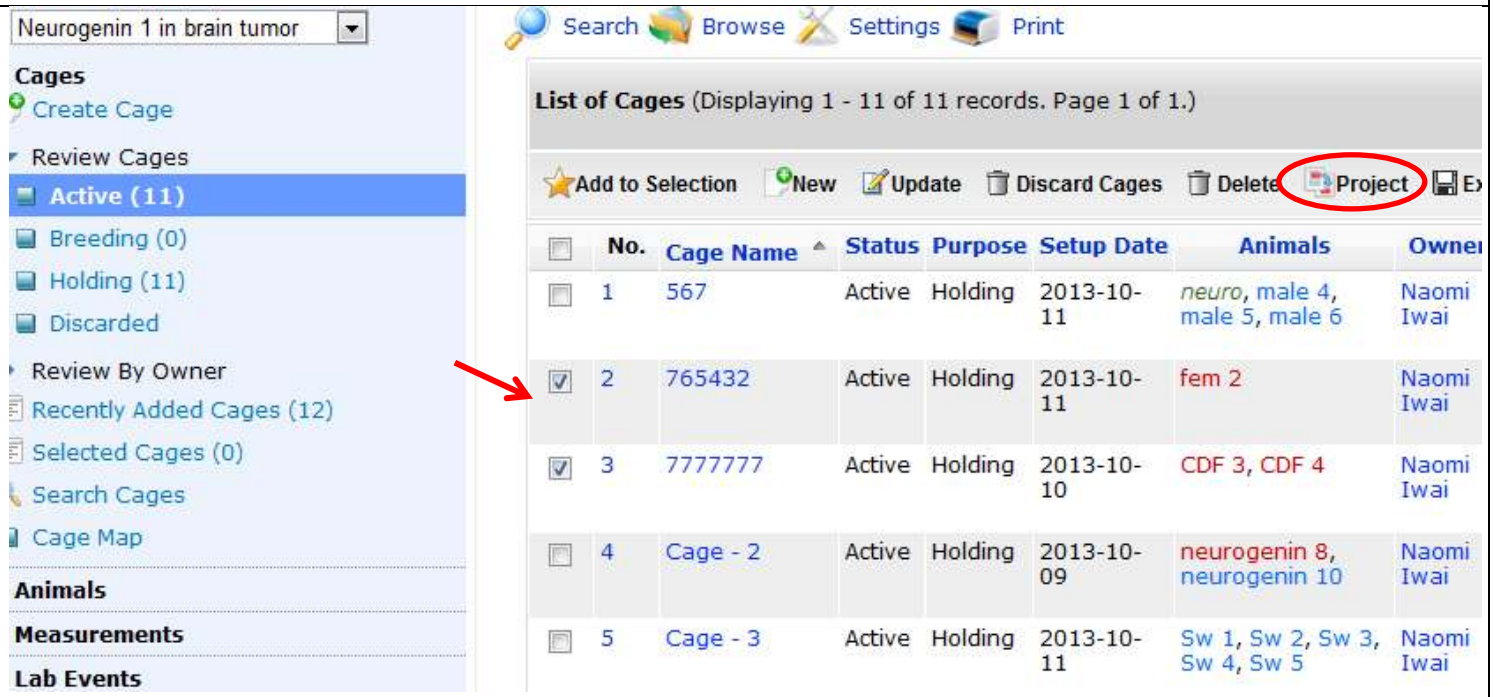
A list of discarded cages will display in Cages > Review Cages > Discarded

You can make a discarded cage Active again by updating and changing the Status to Active.

Move Cage To Different Project

You can move a cage and its animals to a different Project.

1. **In Review Cages List, select the cages that you want to move by checking the check boxes**
2. **Click on Project**



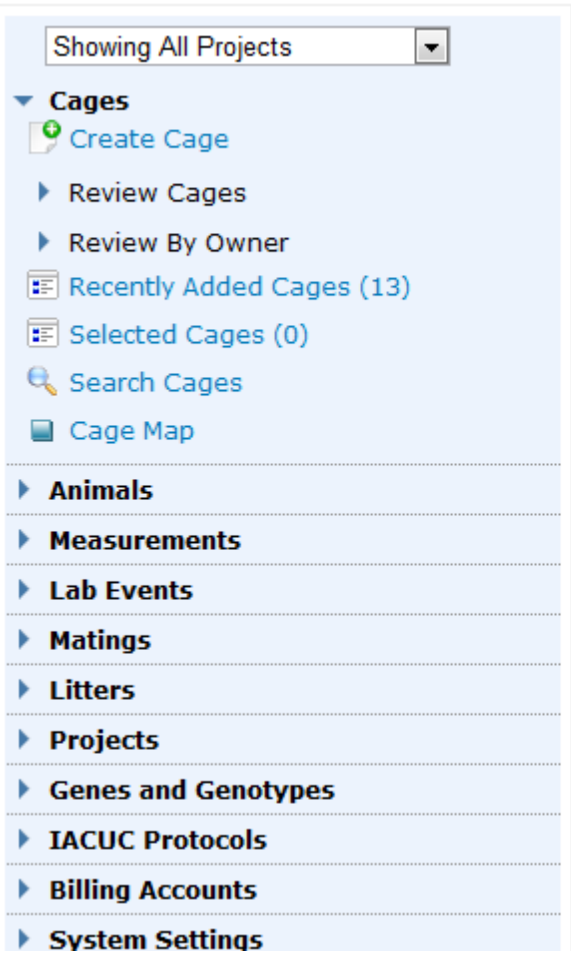
3. **In Move Cage to Different Project window, select the target Project**

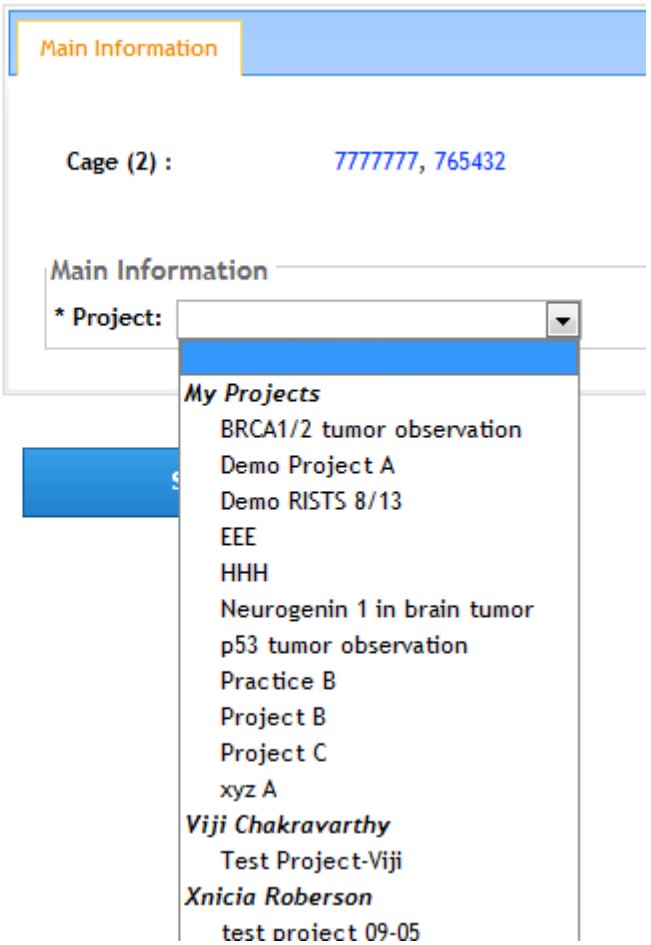
4. **Click Save**

<u>Cage plus animals in the cage will be moved to the target Project</u>

Note: IACUC Protocol and Billing Account information for the cage and animals will not change upon moving to different Project. Remember to update if necessary.

<u>Note</u><u>: when you move your cage and animals to someone else's Project</u>, remember to change the Owner of the cage and animals to the person who receives the cage. Otherwise, this person may not be able to use the cage and animals (also see explanation in Section 5 Animals > Move Animals).

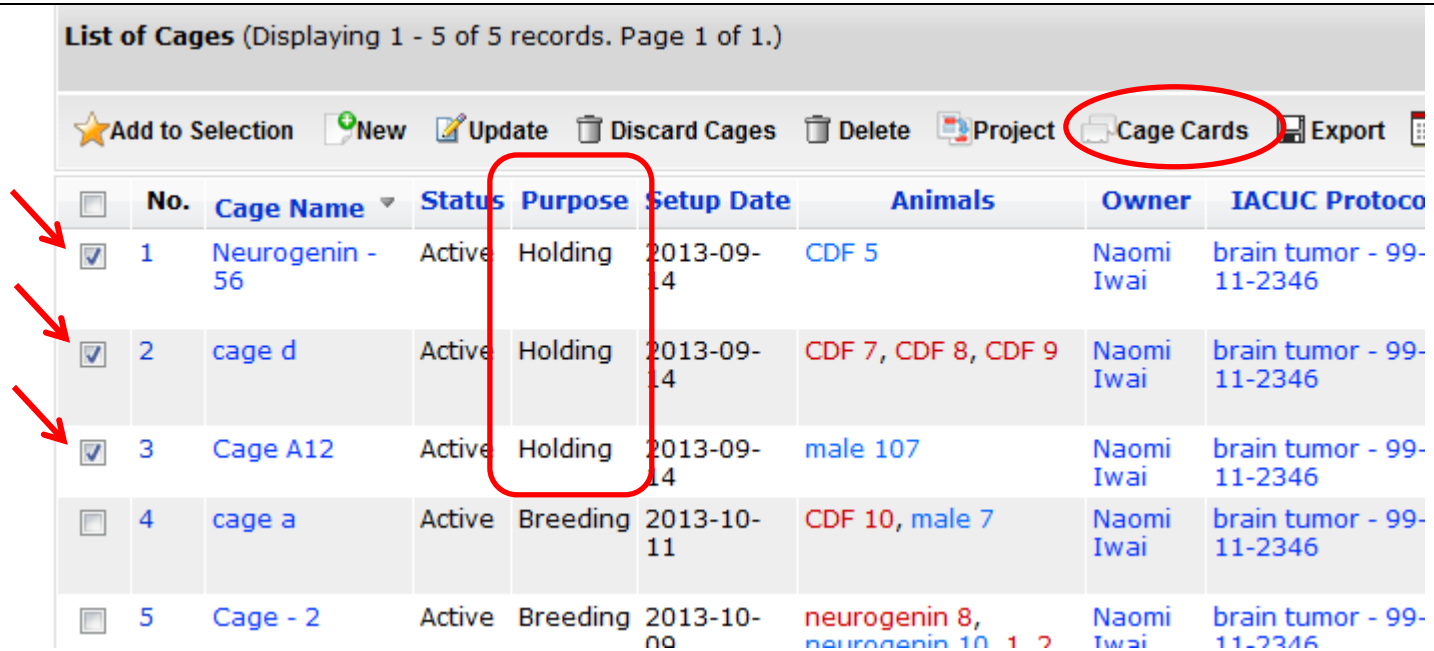




Cage Cards

There are two cage card designs in mLIMS: for Holding Cages and Breeding Cages. Whether a cage is a Holding Cage or Breeding Cage is defined in the 'Purpose' field of cages: Holding or Breeding.

1. **In Review Cages List, select the cages for which you want to create cage cards by checking the check boxes**
2. **Click on Cage Cards**



3. Cage cards will be displayed (these are for Holding Cages)

Cage:**Neurogenin - 56** Setup Date:**2013-09-14**
Owner:**Naomi Iwai** Phone:**713-798-1111**
PI:**RISTS** Project:**Neurogenin 1 in brai...**
Protocol:**99-11-2346** Billing Account:**11-22222**
BSRB/SB.8000/1/B/4

Animal	Sex	DOB	Coat	Ear Punch	Genotypes
CDF 5	M	2013-09-17	Black	12	PTEN: +/-

Cage:**cage d** Setup Date:**2013-09-14**
Owner:**Naomi Iwai** Phone:**713-798-1111**
PI:**RISTS** Project:**Neurogenin 1 in brai...**
Protocol:**99-11-2346** Billing Account:**11-22222**
BSRB/SB.8000/1/A/4

Animal	Sex	DOB	Coat	Ear Punch	Genotypes
CDF 7	F	2013-08-06	Agouti	40	FGF8: +/-; Neurogenin 1: wt
CDF 8	F	2013-08-06	Agouti	41	FGF8: +/+; Neurogenin 1: het
CDF 9	F	2013-08-20	Black	42	FGF8: +/+; Neurogenin 1: wt

Cage:**Cage A12** Setup Date:**2013-09-14**
Owner:**Naomi Iwai** Phone:**713-798-1111**
PI:**RISTS** Project:**Neurogenin 1 in brai...**
Protocol:**99-11-2346** Billing Account:**11-22222**

Breeding cage cards will look like this

Cage:**Cage - 2** Setup Date:**2013-10-09**
Owner:**Naomi Iwai** Phone:**713-798-1111**
PI:**RISTS** Project:**Neurogenin 1 in brain tumor**
Protocol:**99-11-2346** Billing Account:
Matings:**neurogenin 1**
BSRB/SB.8000/1/A/6

	Animal	DOB	Coat	Ear Punch	Genotypes
S	neurogenin 10	2013-10-09	Agouti	15	FGF8: +/+; Neurogenin 1: het
D1	neurogenin 8	2013-10-09	Agouti	11	FGF8: +/+; Neurogenin 1: het
D2					

Litter	DOB	Pups #	Litter	DOB	Pups #
neurogenin 1	2013-10-11	6			

If you select a Holding cage that contains more than 5 animals and click on Cage Card, an error message will display and you cannot create a cage card.

Error. There are more than five animals in this cage. Please verify your cage and try again.
Please click the following to review: Cage A12

If you select a Breeding cage that contains more than 2 dams and click on Cage Card, an error message will display and you cannot create a cage card.

Error. There are more than two dams in this cage. Please verify your cage and try again.
Please click the following to review: Cage - 2

Cage Report

You can create and print a report that displays cage and animal information.

1. **In Review Cages List, select the cages for which you want to create a cage report by checking the check boxes**
2. **Click on Cage Report**

No.	Cage Name	Status	Purpose	Setup Date	Animals	Owner	IACUC Prot
1	Cage - 5	Active	Holding	2013-10-12	neuro 1, neuro 2, neuro 3, neuro 4, neuro 5	Naomi Iwai	brain tumor - 11-2346
2	Cage - 6	Active	Holding	2013-10-12	neuro 6, neuro 7, neuro 8, neuro 9	Naomi Iwai	brain tumor - 11-2346
3	Cage A12	Active	Holding	2013-09-14	male 107, male 13, male 14, male 15, male 16	Naomi Iwai	brain tumor - 11-2346
4	cage d	Active	Holding	2013-09-14	CDF 9	Naomi Iwai	brain tumor - 11-2346
5	Neurogenin - 56	Active	Holding	2013-09-14	CDF 5	Naomi Iwai	brain tumor - 11-2346
6	cage a	Active	Breeding	2013-10-	CDF 10, male 7	Naomi	brain tumor -

3. Cage Report displays

Cage: Cage A12

Setup Date: 2013-09-14
MDA Cage#: 76555555
Locations: BSRB/SB.8000/1

Owner: Naomi Iwai
PI: RISTS
Project: Neurogenin 1 in brain tumor
IACUC Protocol: brain tumor - 99-11-2346
Billing Account: 11-22222

No.	Animal	Sex	DOB	Coat	Ear Punch	Strain	Genotypes
1.	male 107	Male	2013-09-03	Black	111		FGF8: +/+; Neurogenin 1: null
2.	male 13	Male	2013-10-11	Agouti	6		FGF8: +/-
3.	male 14	Male	2013-10-11	Agouti	7		FGF8: +/-
4.	male 15	Male	2013-10-11	Agouti	8		FGF8: +/-

Cage: Cage - 5

Setup Date: 2013-10-12
MDA Cage#: 8009332
Locations: BSRB/SB.8000

Owner: Naomi Iwai
PI: RISTS
Project: Neurogenin 1 in brain tumor
IACUC Protocol: brain tumor - 99-11-2346
Billing Account: 11-22222

No.	Animal	Sex	DOB	Coat	Ear Punch	Strain	Genotypes
1.	neuro 1	Female	2013-10-12	Agouti	806		Neurogenin 1: het
2.	neuro 3	Female	2013-10-12	Black	808		Neurogenin 1: het

Cage: Cage - 6

Setup Date: 2013-10-12
MDA Cage#:
Locations: BSRB/SB.8000

Owner: Naomi Iwai
PI: RISTS
Project: Neurogenin 1 in brain tumor
IACUC Protocol: brain tumor - 99-11-2346
Billing Account: 11-22222

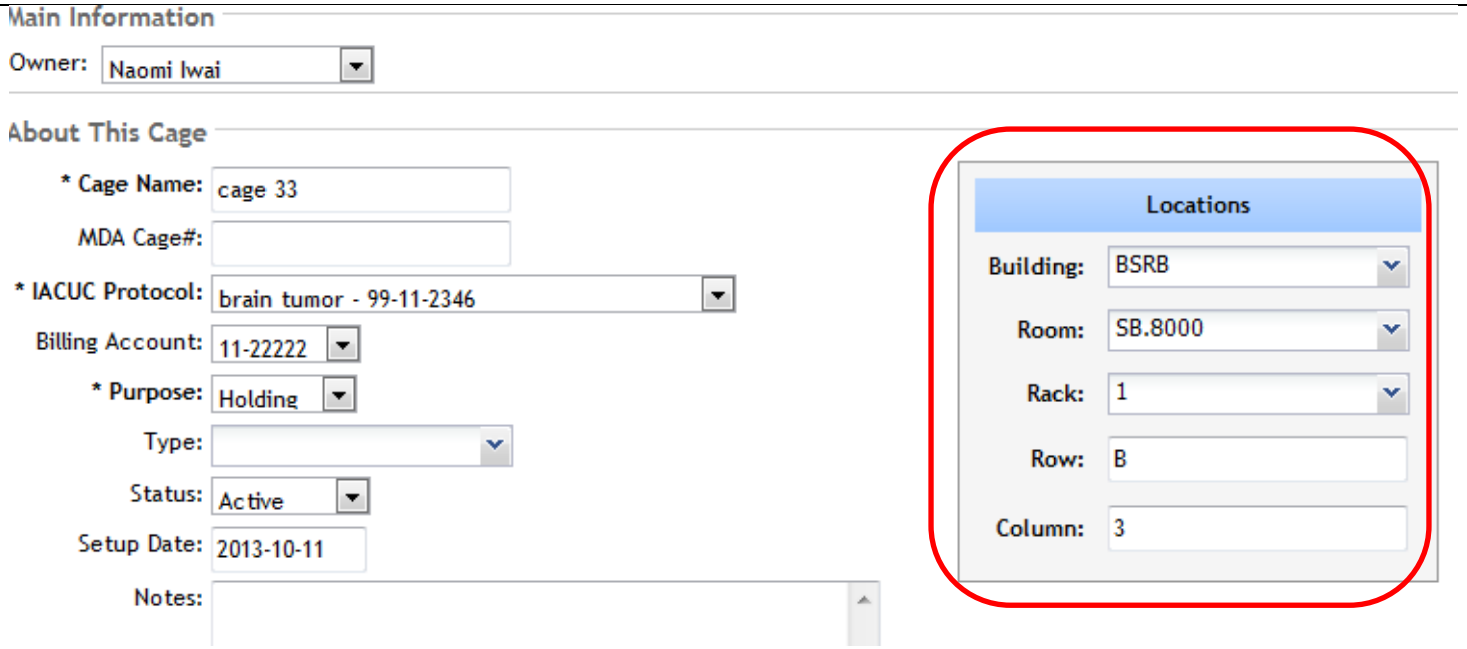
No.	Animal	Sex	DOB	Coat	Ear Punch	Strain	Genotypes
1.	neuro 6	Female	2013-10-12	Agouti	811		Neurogenin 1: wt

Cage Map

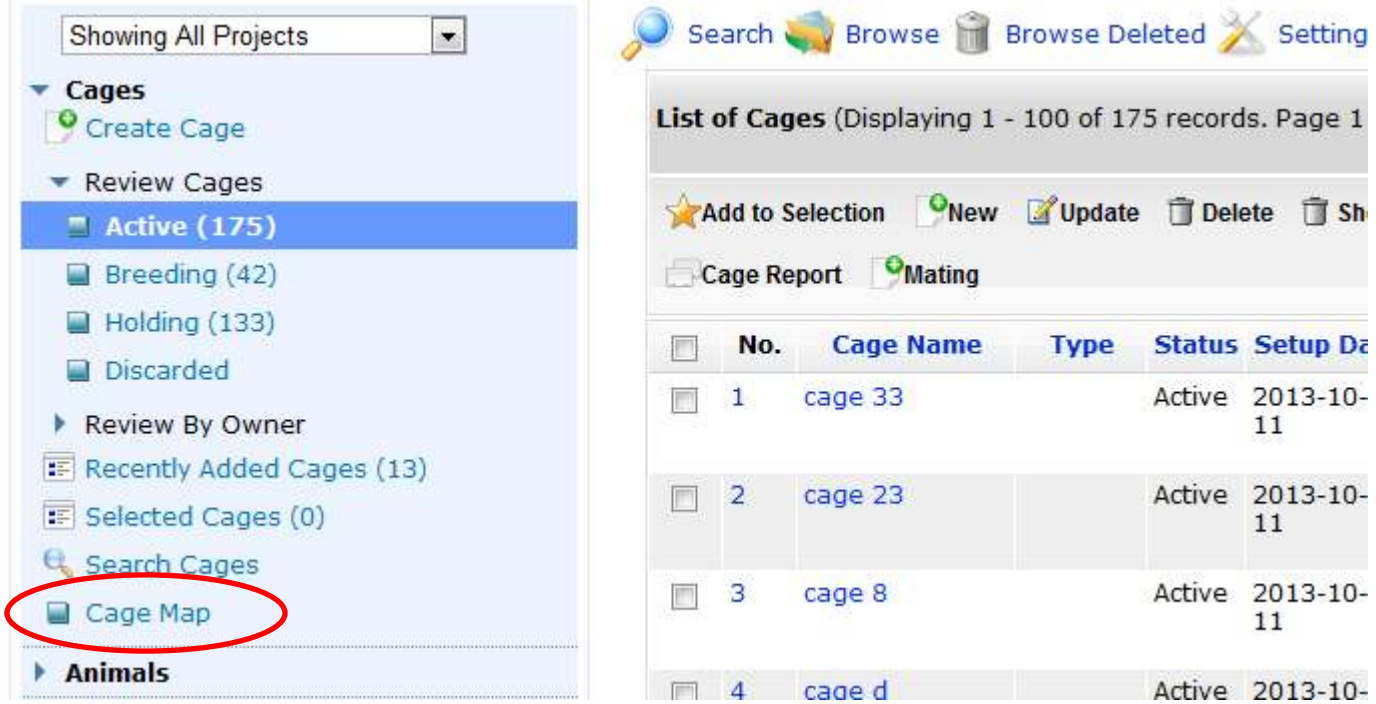
The Cage Map function allows you to view your cages in a rack view.

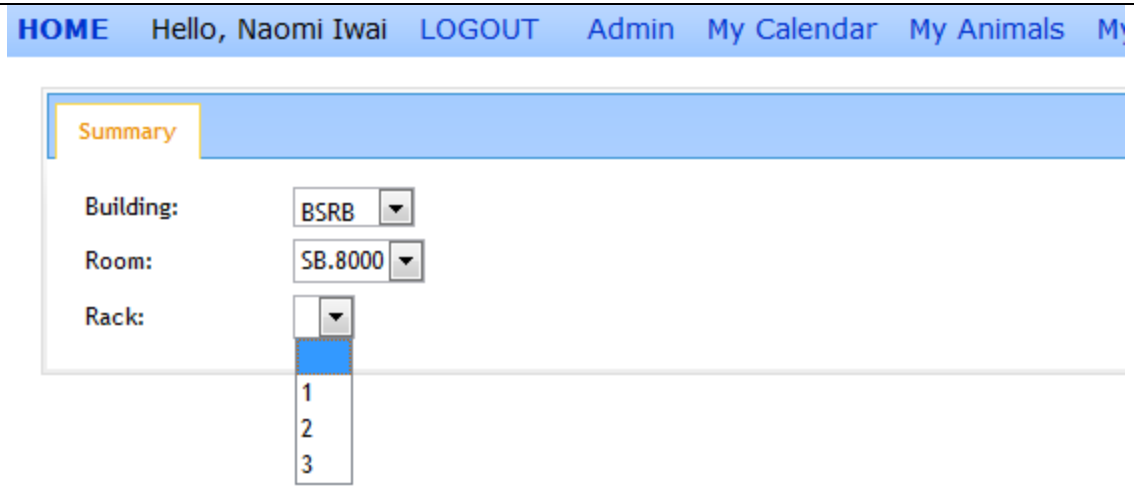
If you enter all cage location fields, i.e. Building, Room, Rack, Row and Column for each cage, you can view your cages in Cage Map.

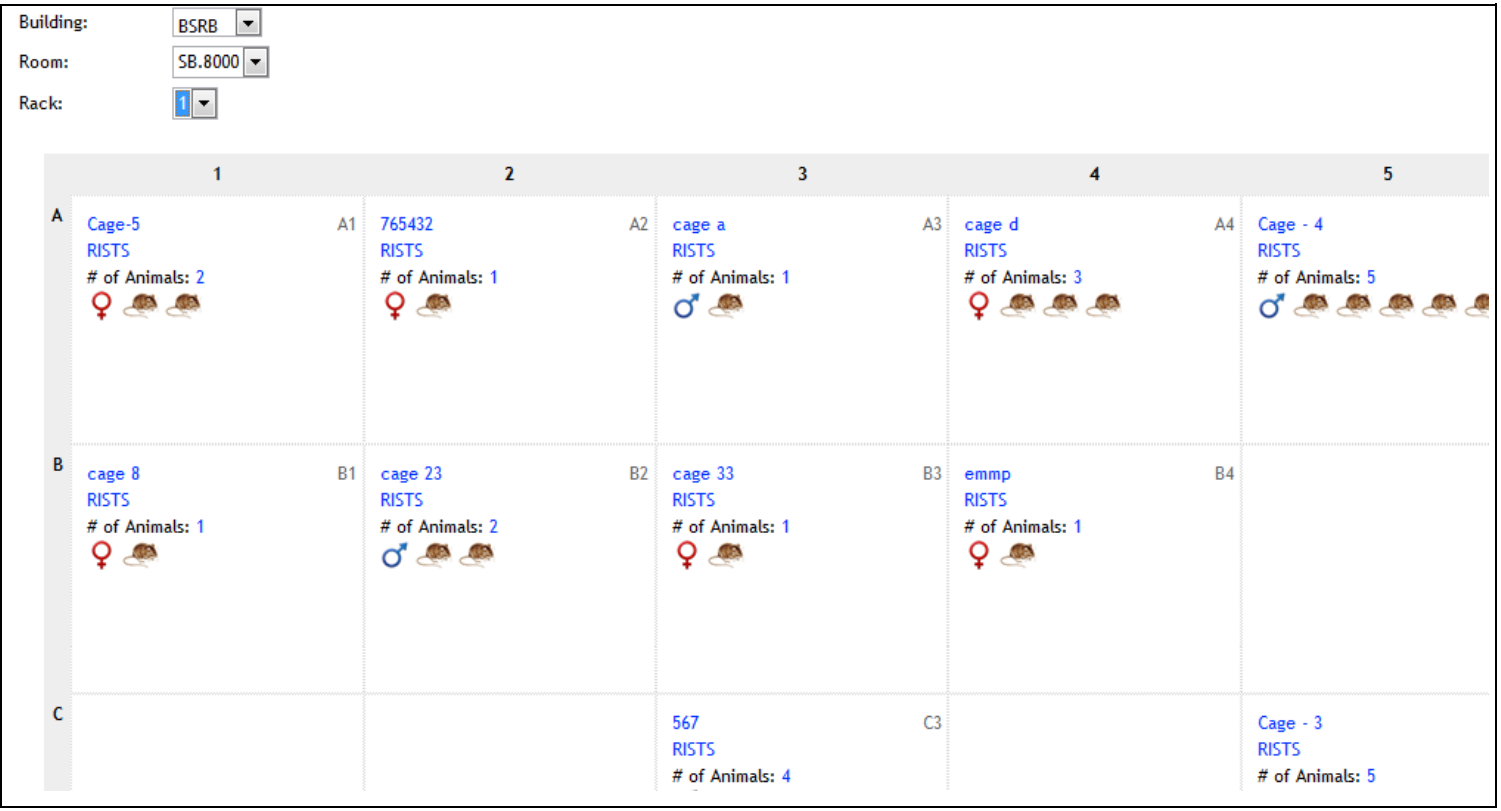
Note: to use the Cage Map function, all cage location options for Building, Room, Racks have to be set up in System Settings > Settings > Drop Down List tab by your lab mLIMS manager (see Section 2 Setting Up Your mLIMS System)



1. **In left hand menu, select Cages > Cage Map**



2. Select Building, Room and Rack	

3. Cage Map displays for the rack	

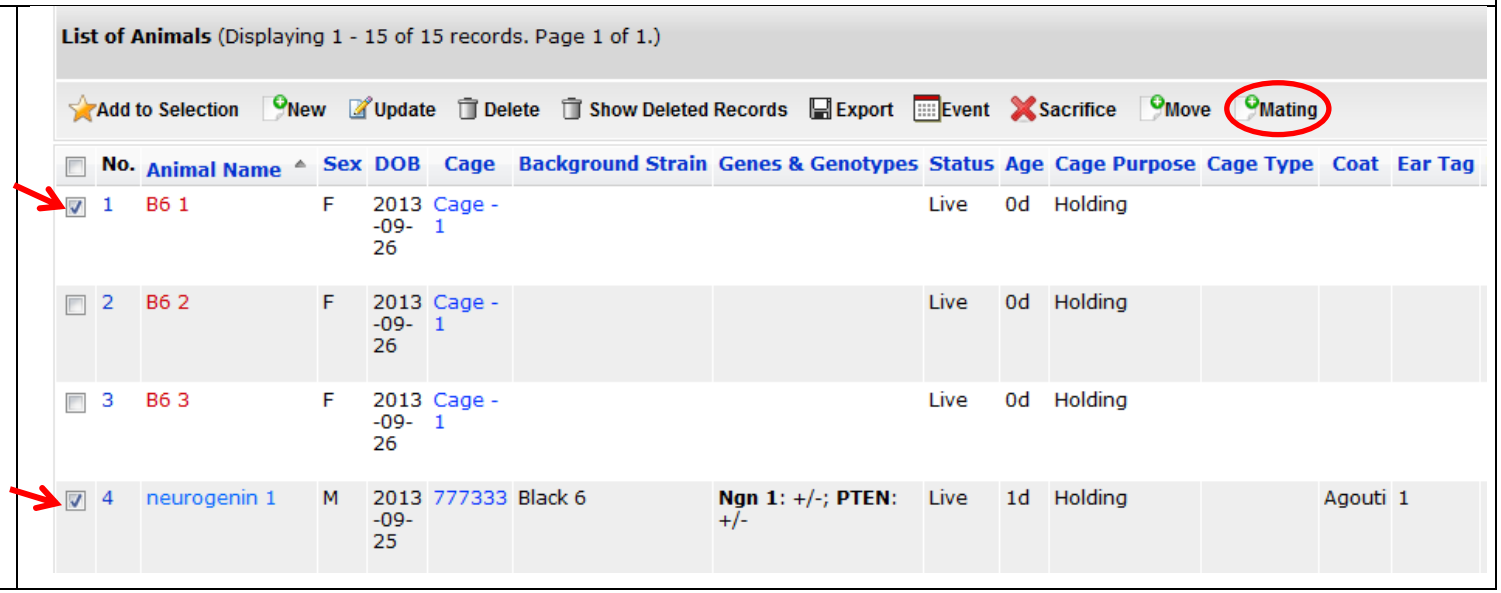
Section 7Matings and Litters

Set Up Mating

There are three possible ways to set up a mating.

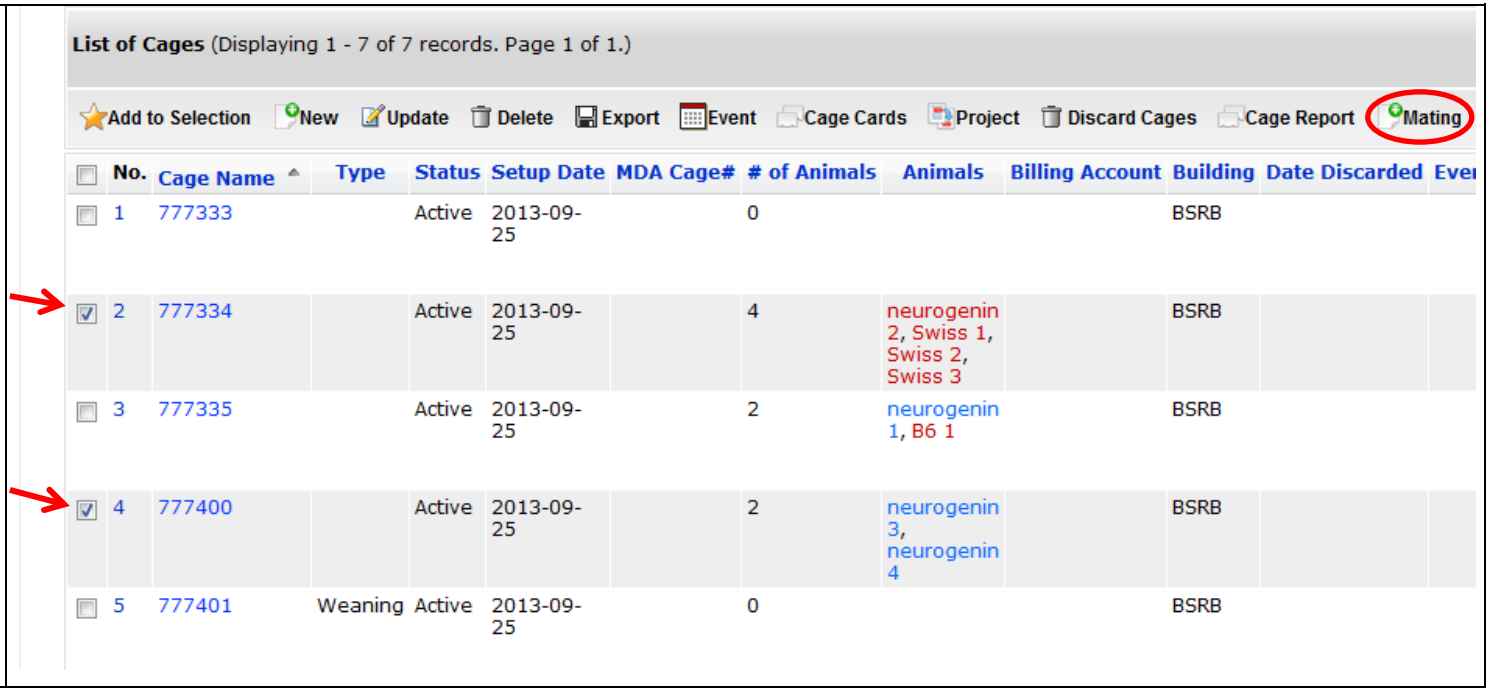
Method 1 Create a mating from Review Animals List

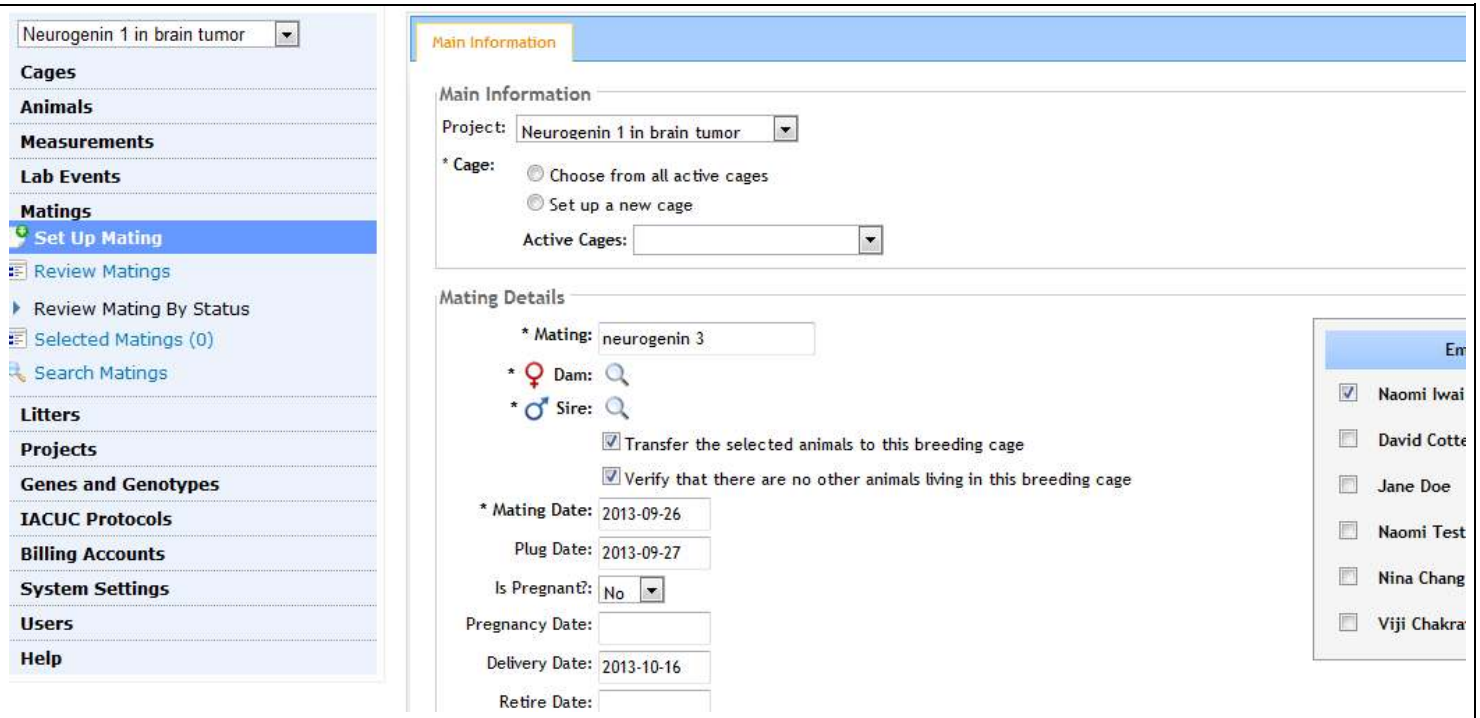
In Review Animals List, select dam and sire and click on Mating button



Method 2 Create a mating from Review Cages List

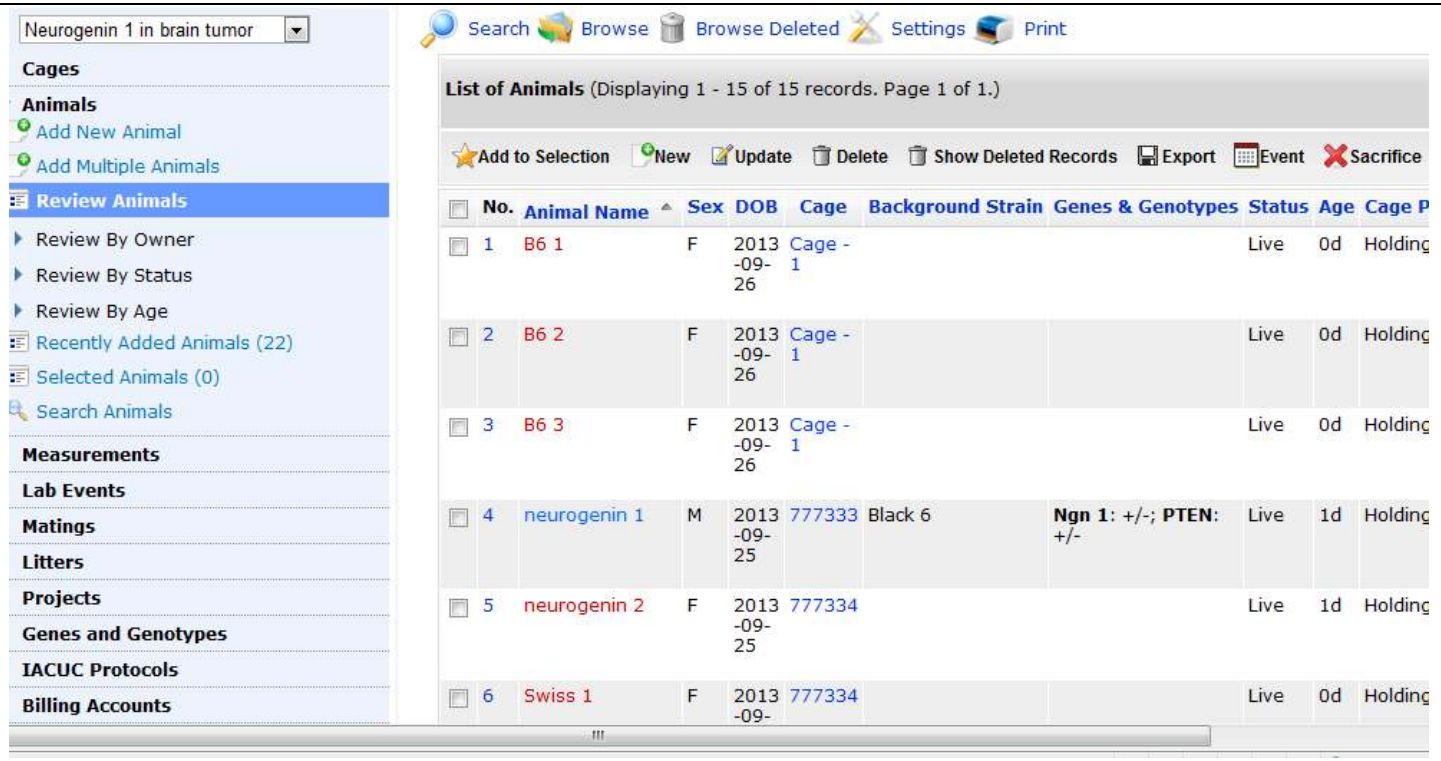
In Review Cages List, select cages that contain dam and sire and click on Mating button



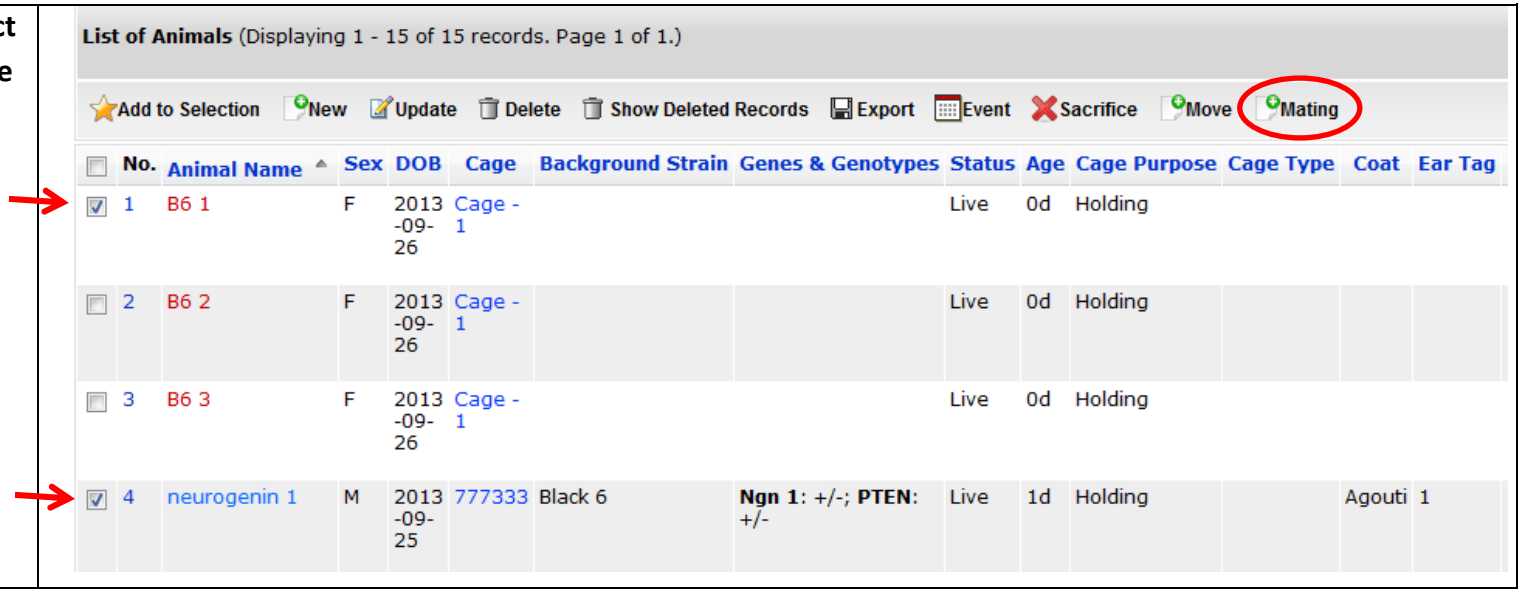
Method 3 In Matings, select Set Up Mating	

Create a Mating from Review Animals List

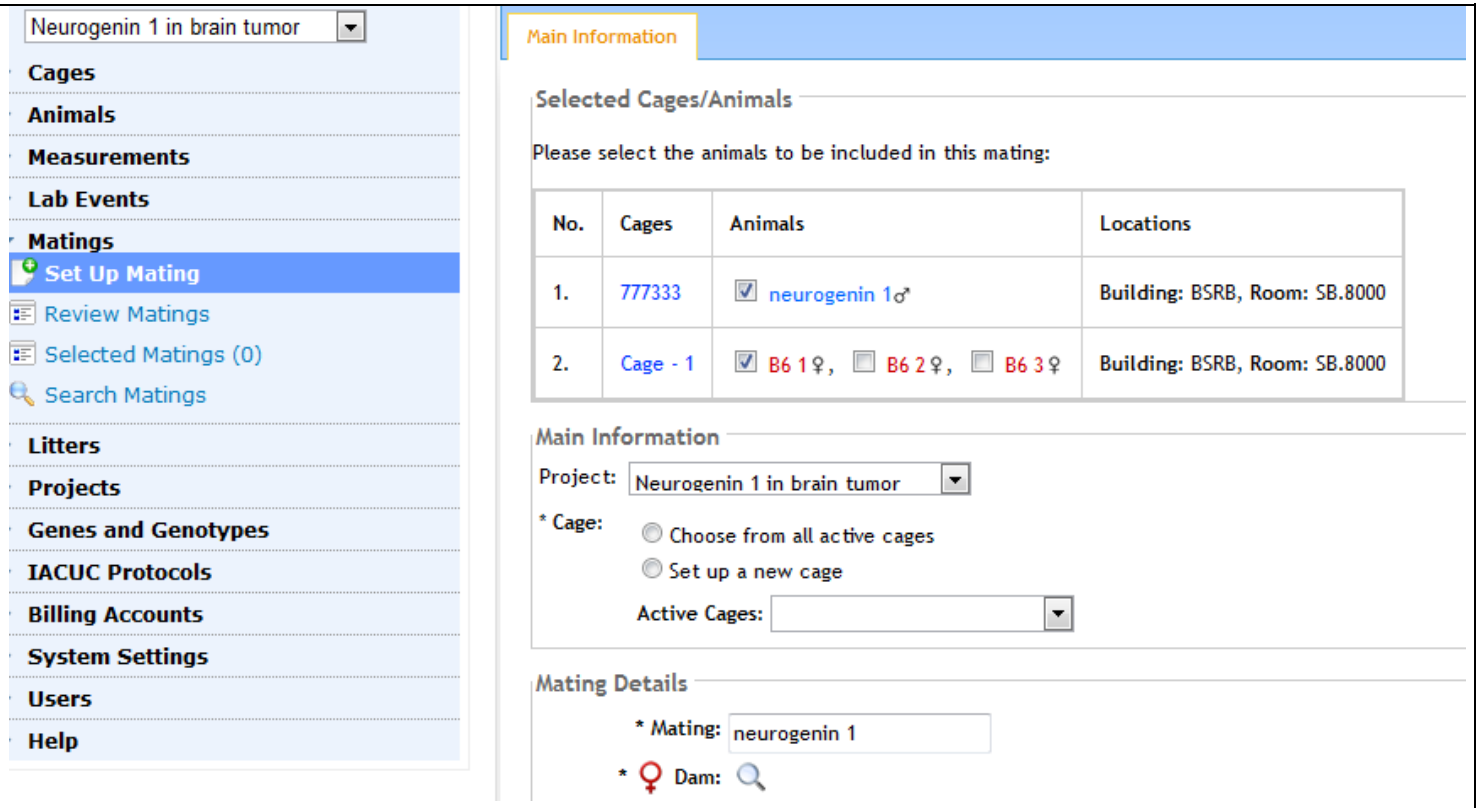
1. **Select in left hand menu Animals > Review Animals**



2. **In Review Animals List, select dam and sire by checking the check boxes**
3. **Click on Mating button**

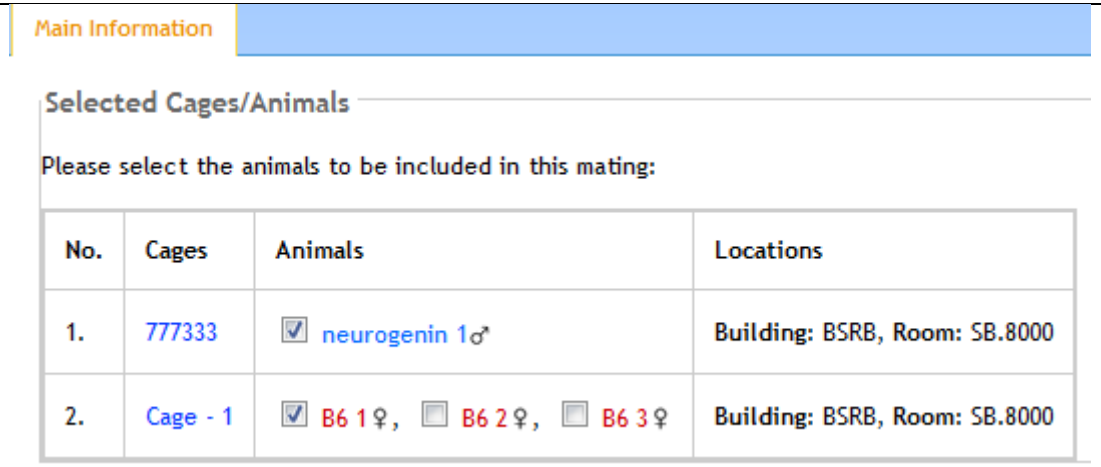


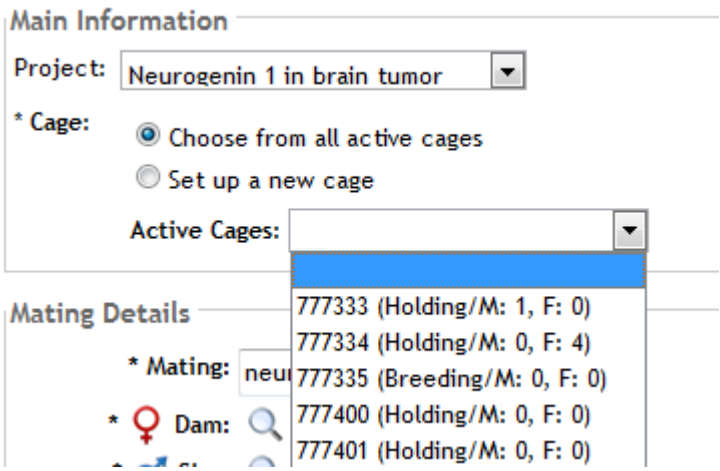
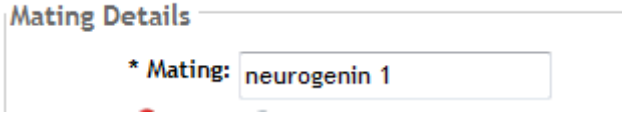
4. Set Up Mating window will display



5. Select sire and dam

Note that other animals in the same cage are also displayed. You can select a different animal from this table. You can also add more animals to the mating (in this example, we will create a simple one male – one female mating).



6. Select breeding cage You can choose from existing cages in this project or set up a new cage. **Note**: when you choose an existing cage, make sure it is a <u>Breeding Cage</u>	
7. Create Mating Name A mating name is mandatory and has to be unique in the lab (there cannot be two identical mating names in the same lab).	

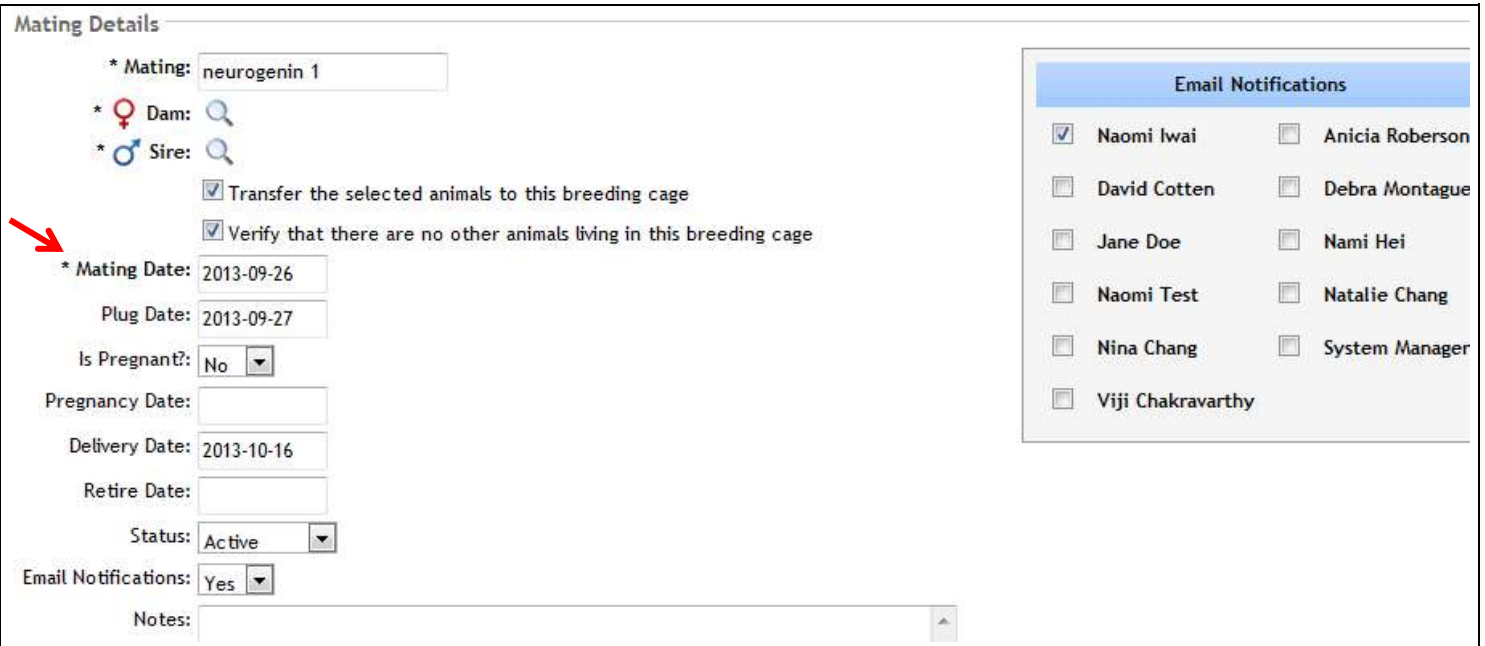
8. Enter Mating Date

By default, Mating Date is today. You can change it to any other date.

Plug Date and **Delivery Date** will be auto-calculated based on the Mating Date you chose and the number of days to Plug and Delivery in your settings (default number of days to Plug should have been set to 1 by your lab mLIMS manage in Settings.You can set up the default number of days to Delivery in your Project settings.)

You can change these dates to any other date in this window.

You can also enter **Retire Date** (the date you plan to discontinue this mating).



9. Set up Email Notifications

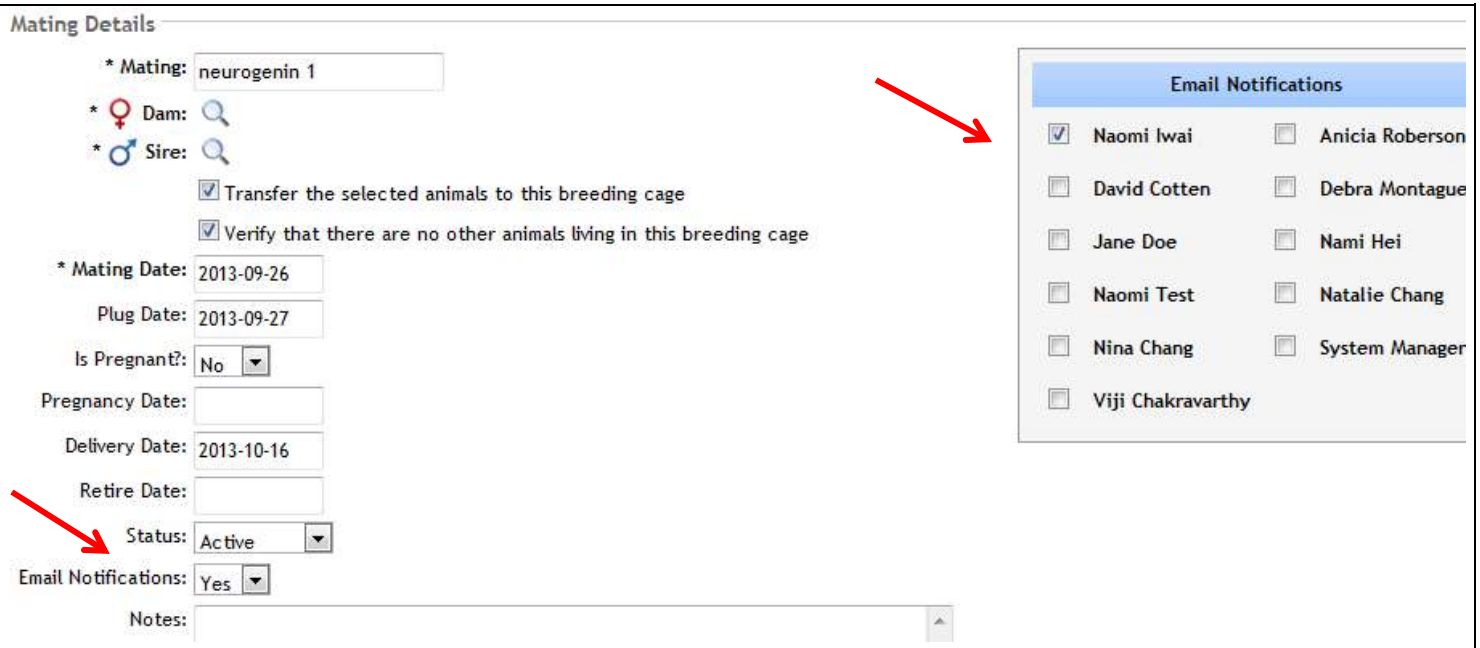
mLIMS will send you email notifications for **Mating reminders, Delivery reminders and Retire reminders.**

(if you don't want emails for this mating, select Email Notifications: No)

In the Email Notifications box, select the email recipients. You can choose any of your lab members.

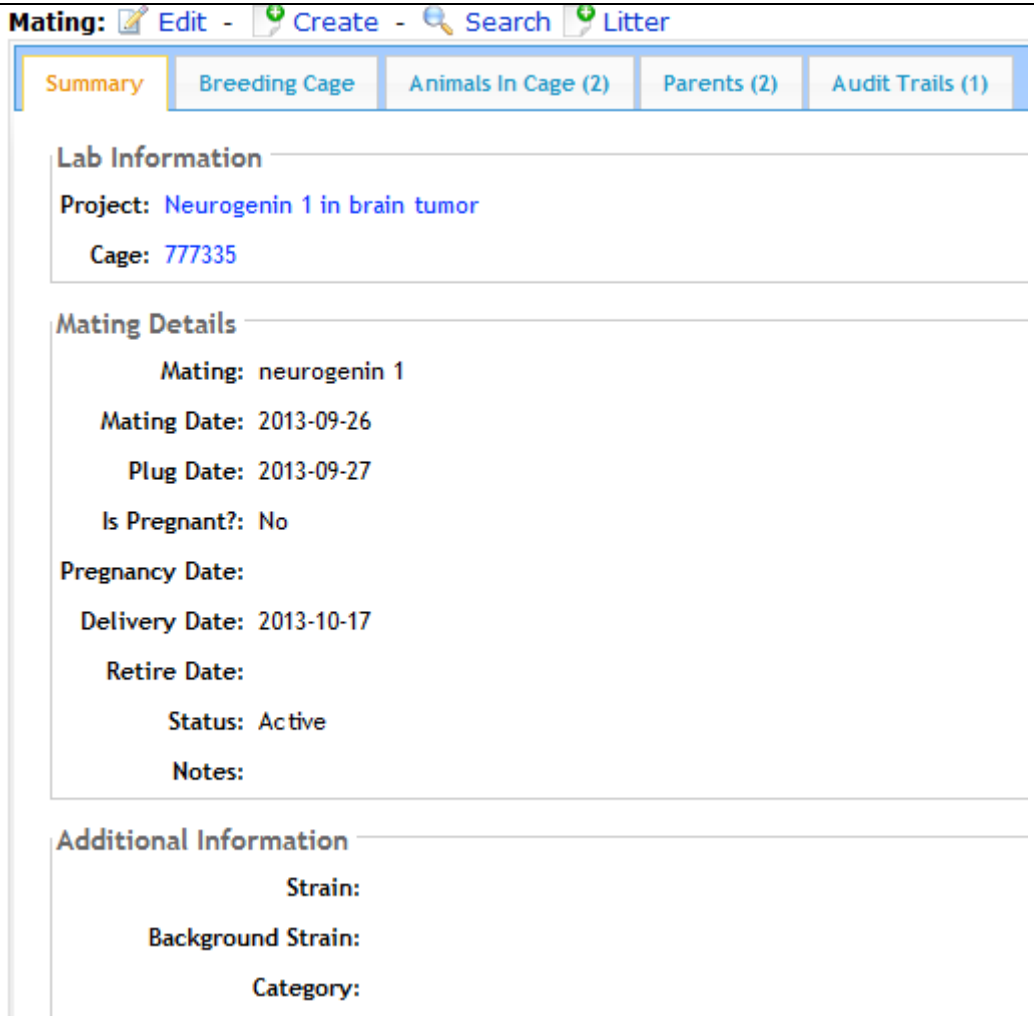
For more information on email notifications, see below Mating & Litter Email Notifications.

10. Click on Save



11. A Summary of your mating will display.

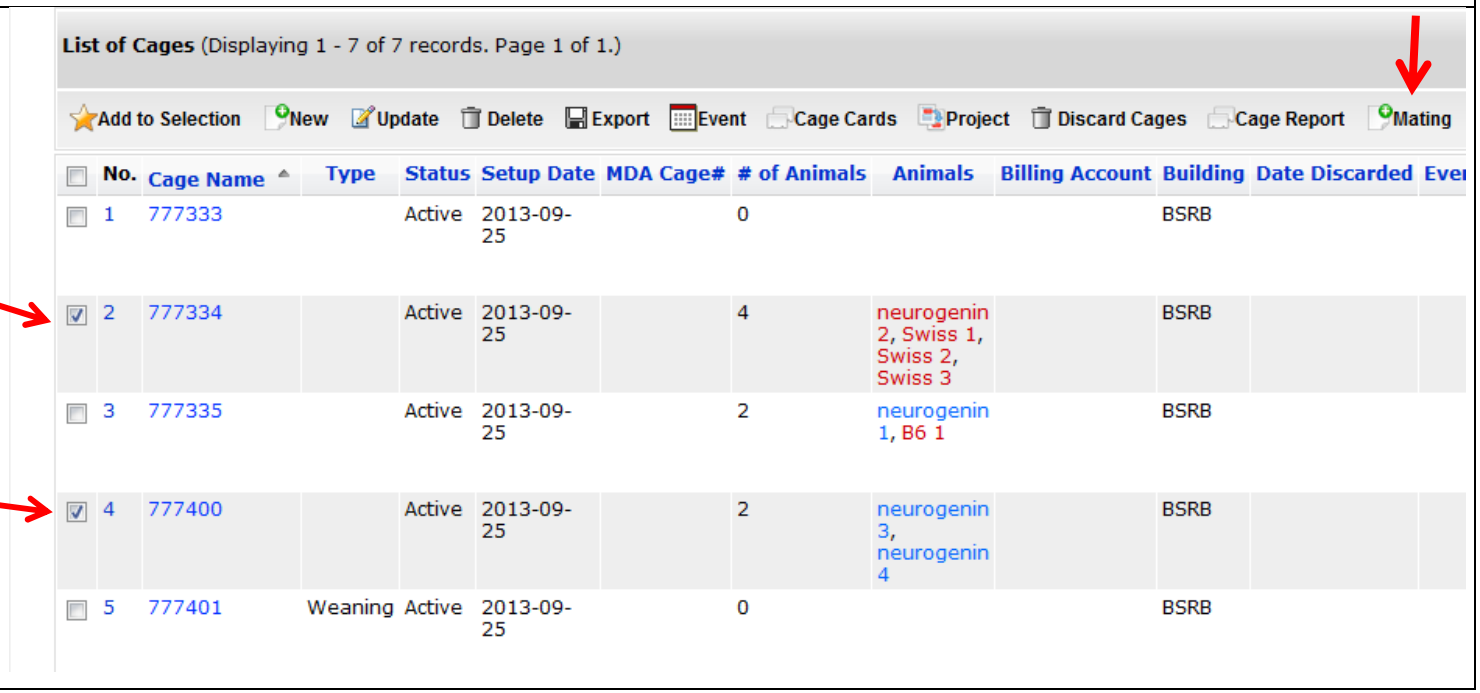
It is good practice to go through each tab (Breeding Cage, Animals in Cage, Parents) and make sure that your mating is set up correctly.

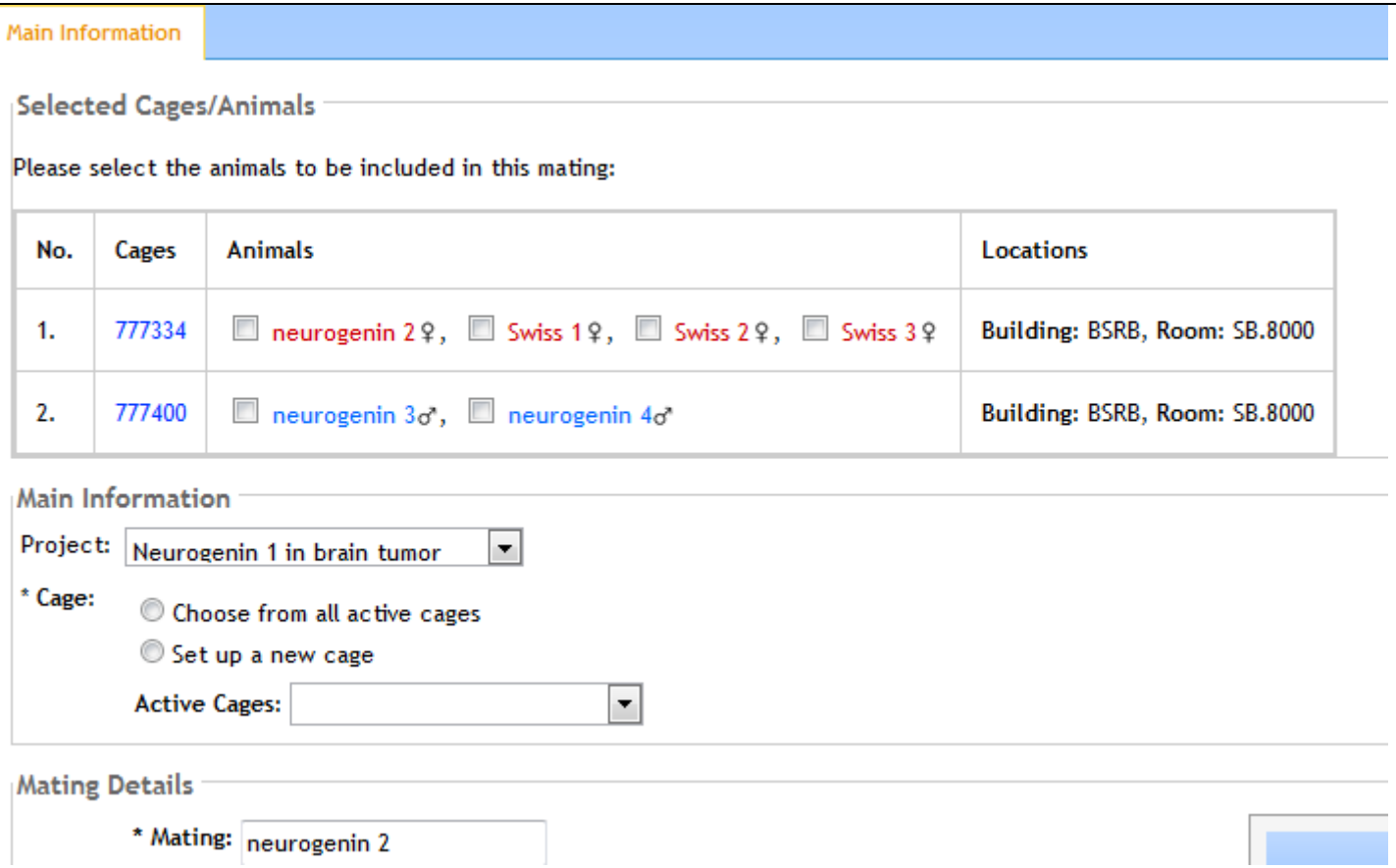


Create a Mating from Review Cages List

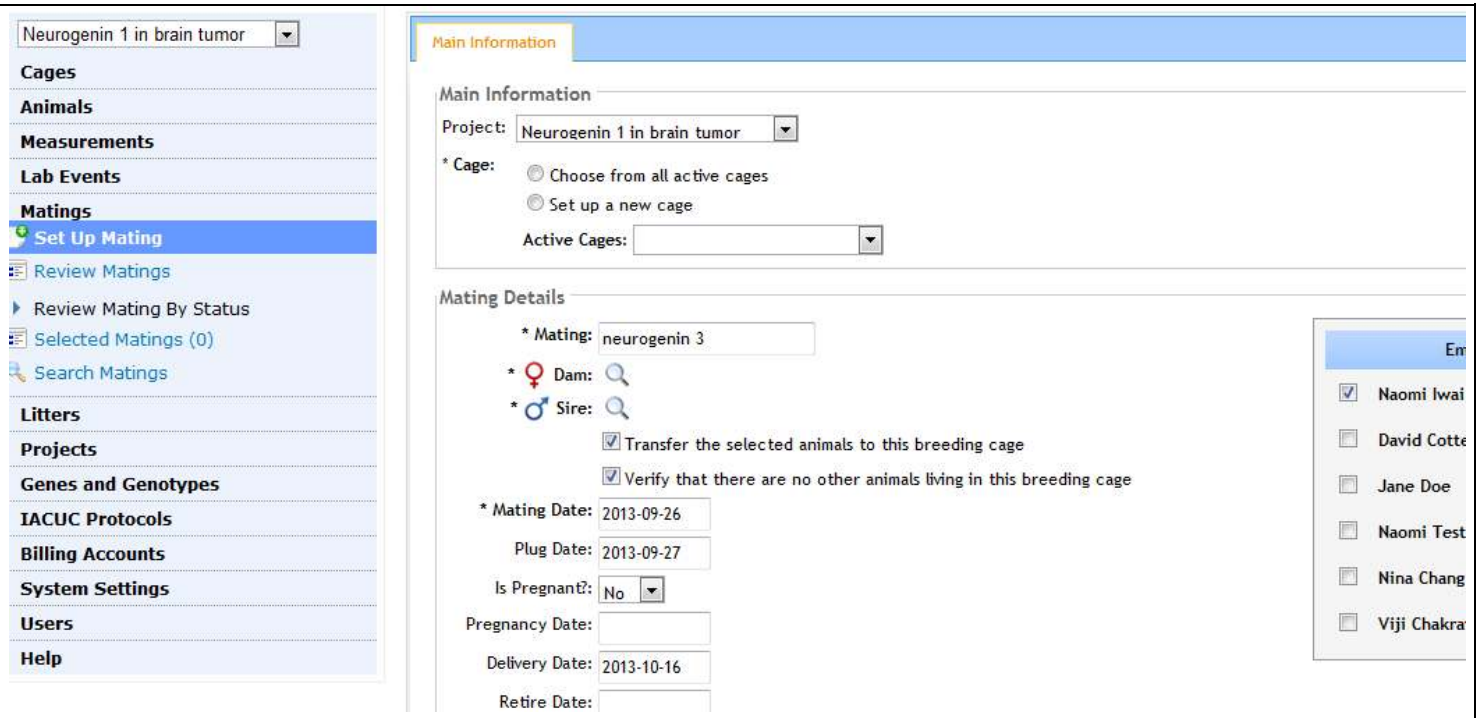
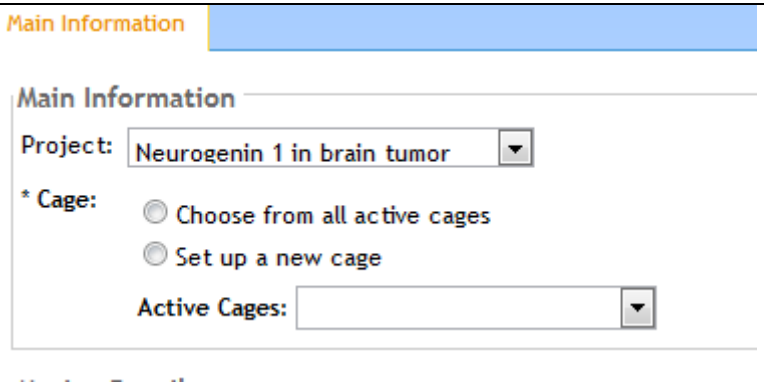
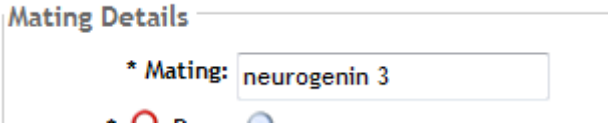
1. **Select in left hand menu Cages > Review Cages**

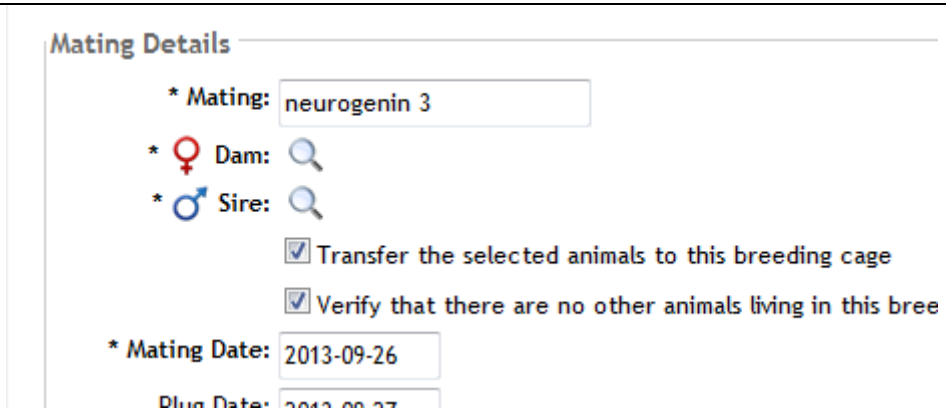
2. **In Review Cages List, select the cages that contain dam and sire by checking the check boxes**
3. **Click on Mating button**

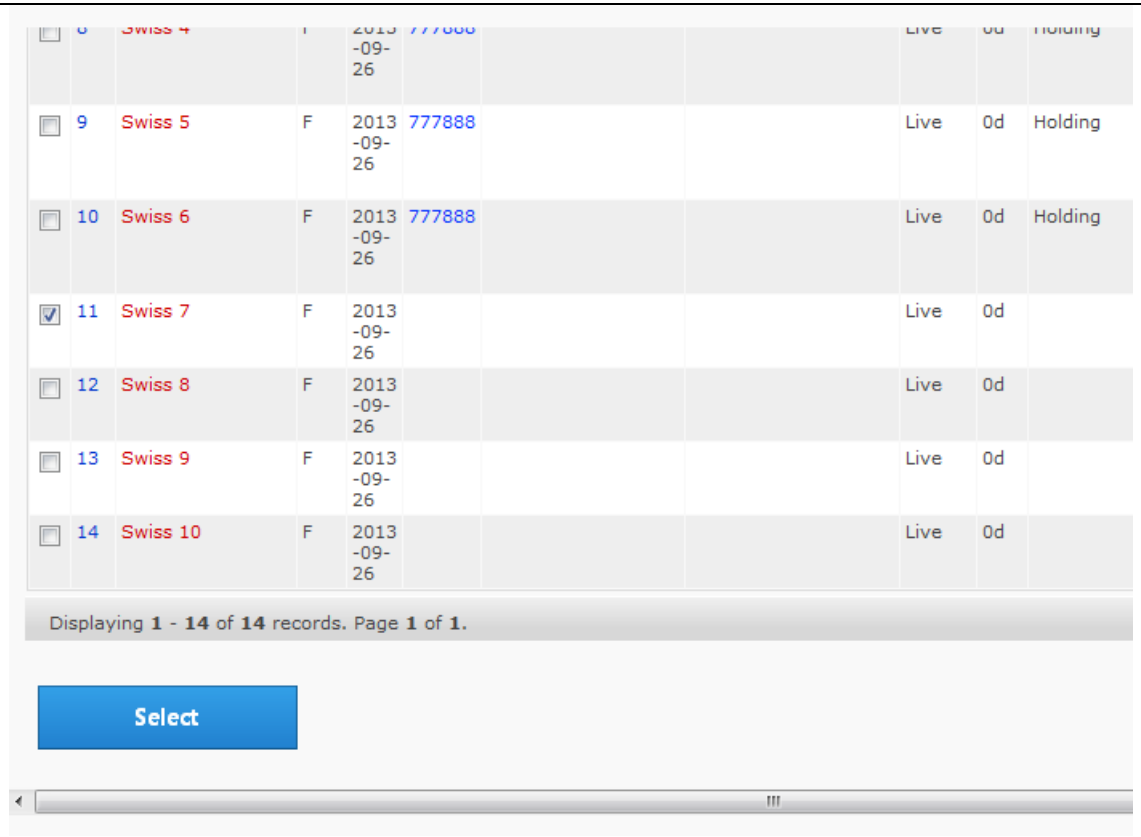
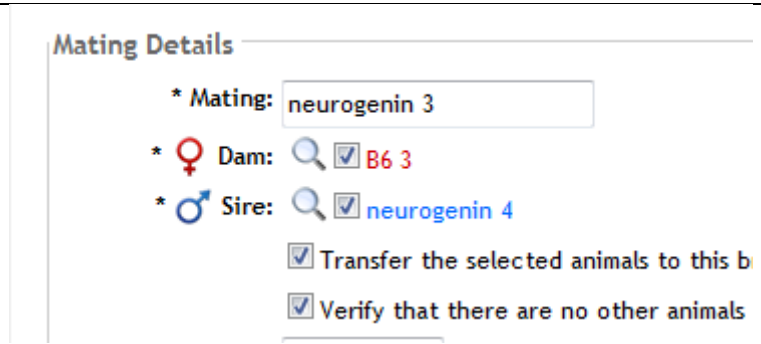


4. Set Up Mating window will display Choose your desired dam and sire by checking the check boxes.	
5. Follow steps 5-11 in above 'Create a Mating from Review Animals List'	

Create a Mating from Matings> Set Up Mating

1. Select in left hand menu Matings> Set Up Mating	
2. Select a breeding cage You can set up a new cage or choose from existing cages (make sure you choose a Breeding Cage).	
3. Create Mating Name	

4. Select Dam by clicking on magnifying glass icon. This will display a list of all females in this Project. **Select your dam(s) by checking the check box(es) and click on Select.**	

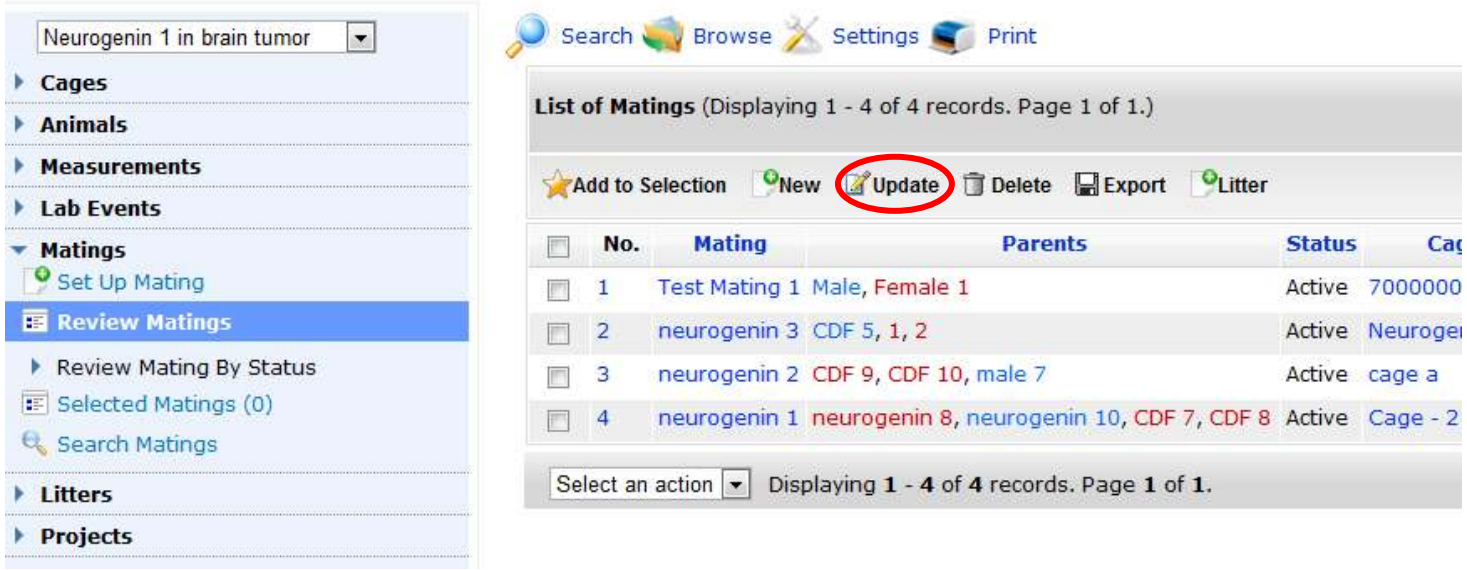
	
5. Select Sire the same as above	
6. Follow steps 8-11 in above 'Create a Mating from	

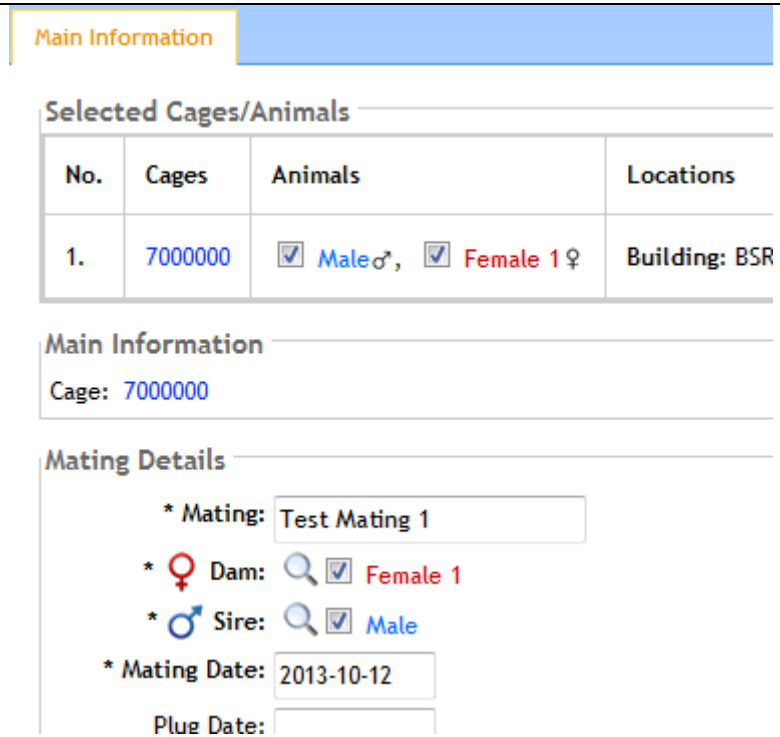
Review Animals'	

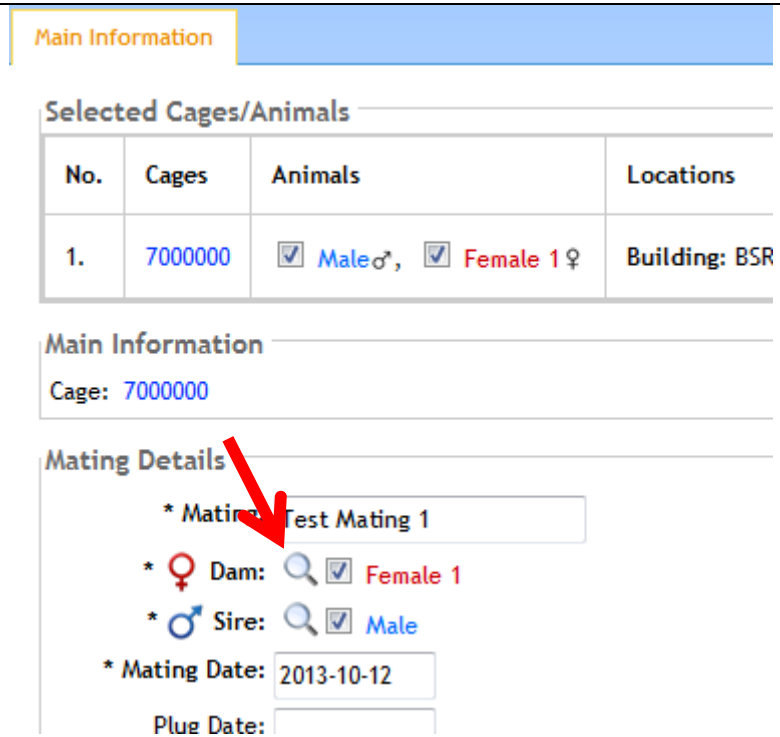
Add Female To Existing Mating

You can add more dams to an existing mating. To do this, follow two steps: 1) add the dams to the mating, and 2) move the dams to the breeding cage.

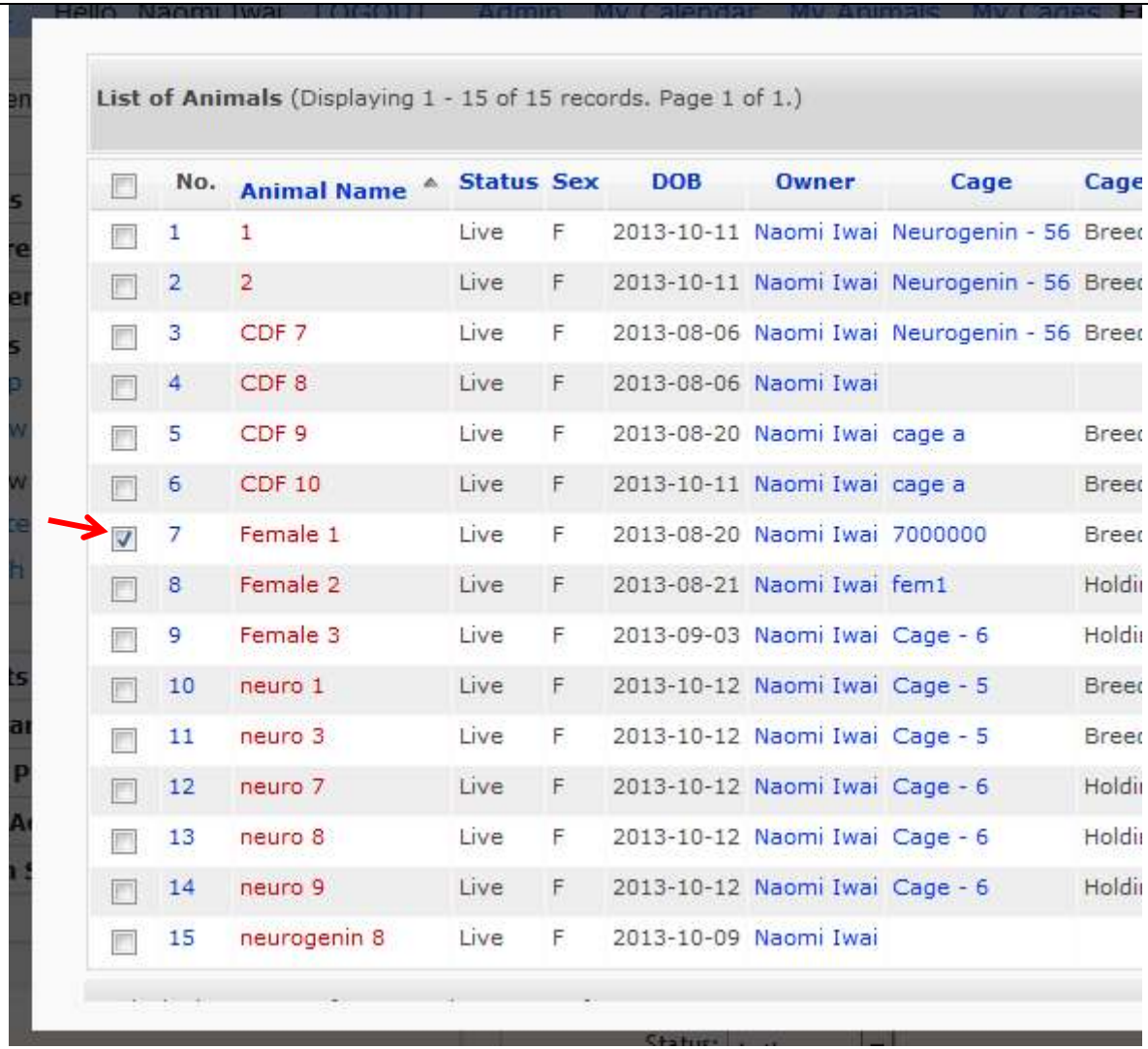
1. Select the mating from Review Matings List and click on Update (or click on mating name and then click Edit)



2. In Mating Information window you will see the existing dam(s) and sire	

3. To add more dams, click on the Dam magnifying glass icon	

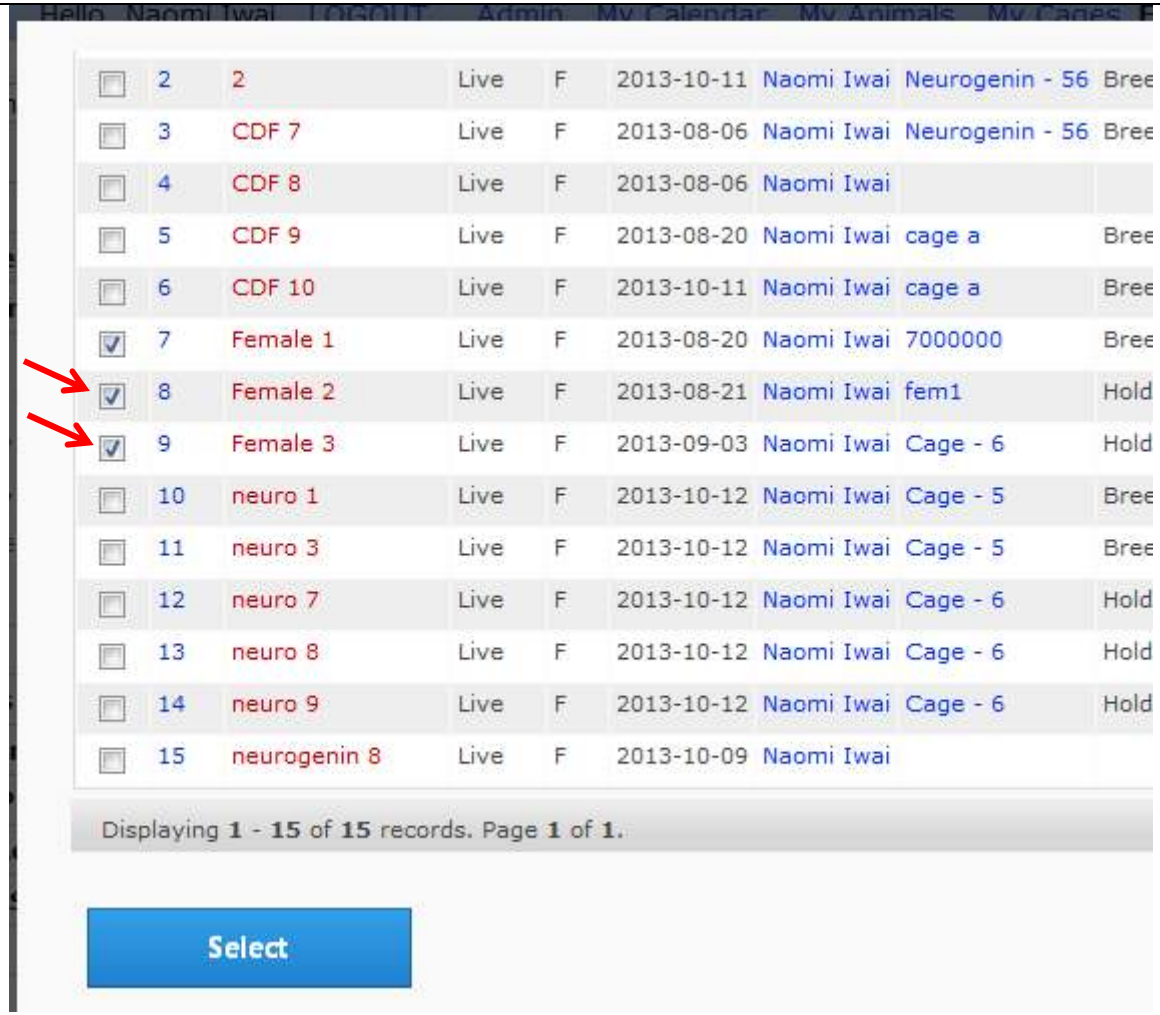
4. **Note that the existing dam has already been selected. Do not uncheck.**



List of Animals (Displaying 1 - 15 of 15 records. Page 1 of 1.)

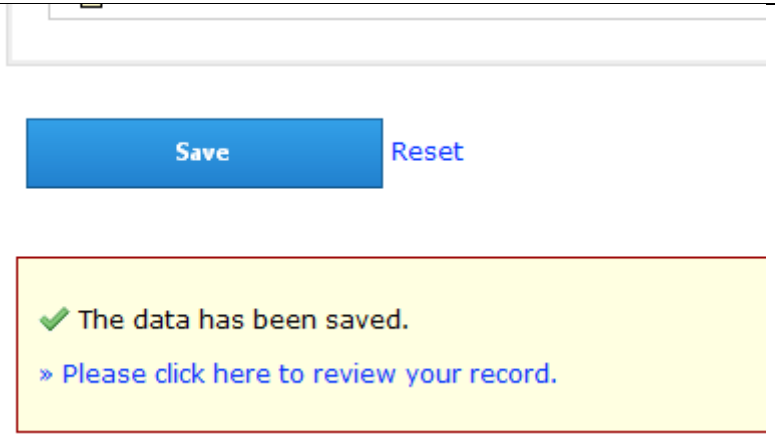
	No.	Animal Name	Status	Sex	DOB	Owner	Cage	Cage
☐	1	1	Live	F	2013-10-11	Naomi Iwai	Neurogenin - 56	Breed
☐	2	2	Live	F	2013-10-11	Naomi Iwai	Neurogenin - 56	Breed
☐	3	CDF 7	Live	F	2013-08-06	Naomi Iwai	Neurogenin - 56	Breed
☐	4	CDF 8	Live	F	2013-08-06	Naomi Iwai		
☐	5	CDF 9	Live	F	2013-08-20	Naomi Iwai	cage a	Breed
☐	6	CDF 10	Live	F	2013-10-11	Naomi Iwai	cage a	Breed
☑	7	Female 1	Live	F	2013-08-20	Naomi Iwai	7000000	Breed
☐	8	Female 2	Live	F	2013-08-21	Naomi Iwai	fem1	Holdi
☐	9	Female 3	Live	F	2013-09-03	Naomi Iwai	Cage - 6	Holdi
☐	10	neuro 1	Live	F	2013-10-12	Naomi Iwai	Cage - 5	Breed
☐	11	neuro 3	Live	F	2013-10-12	Naomi Iwai	Cage - 5	Breed
☐	12	neuro 7	Live	F	2013-10-12	Naomi Iwai	Cage - 6	Holdi
☐	13	neuro 8	Live	F	2013-10-12	Naomi Iwai	Cage - 6	Holdi
☐	14	neuro 9	Live	F	2013-10-12	Naomi Iwai	Cage - 6	Holdi
☐	15	neurogenin 8	Live	F	2013-10-09	Naomi Iwai		

5. **Select the female(s) that you want to add to the mating**
6. **Click Select button**


Hello Naomi Iwai LOGOUT Admin My Calendar My Animals My Cages
2 2 Live F 2013-10-11 Naomi Iwai Neurogenin - 56 Bree
3 CDF 7 Live F 2013-08-06 Naomi Iwai Neurogenin - 56 Bree
4 CDF 8 Live F 2013-08-06 Naomi Iwai
5 CDF 9 Live F 2013-08-20 Naomi Iwai cage a Bree
6 CDF 10 Live F 2013-10-11 Naomi Iwai cage a Bree
7 Female 1 Live F 2013-08-20 Naomi Iwai 7000000 Bree
8 Female 2 Live F 2013-08-21 Naomi Iwai fem1 Hold
9 Female 3 Live F 2013-09-03 Naomi Iwai Cage - 6 Hold
10 neuro 1 Live F 2013-10-12 Naomi Iwai Cage - 5 Bree
11 neuro 3 Live F 2013-10-12 Naomi Iwai Cage - 5 Bree
12 neuro 7 Live F 2013-10-12 Naomi Iwai Cage - 6 Hold
13 neuro 8 Live F 2013-10-12 Naomi Iwai Cage - 6 Hold
14 neuro 9 Live F 2013-10-12 Naomi Iwai Cage - 6 Hold
15 neurogenin 8 Live F 2013-10-09 Naomi Iwai
Displaying 1 - 15 of 15 records. Page 1 of 1.
Select

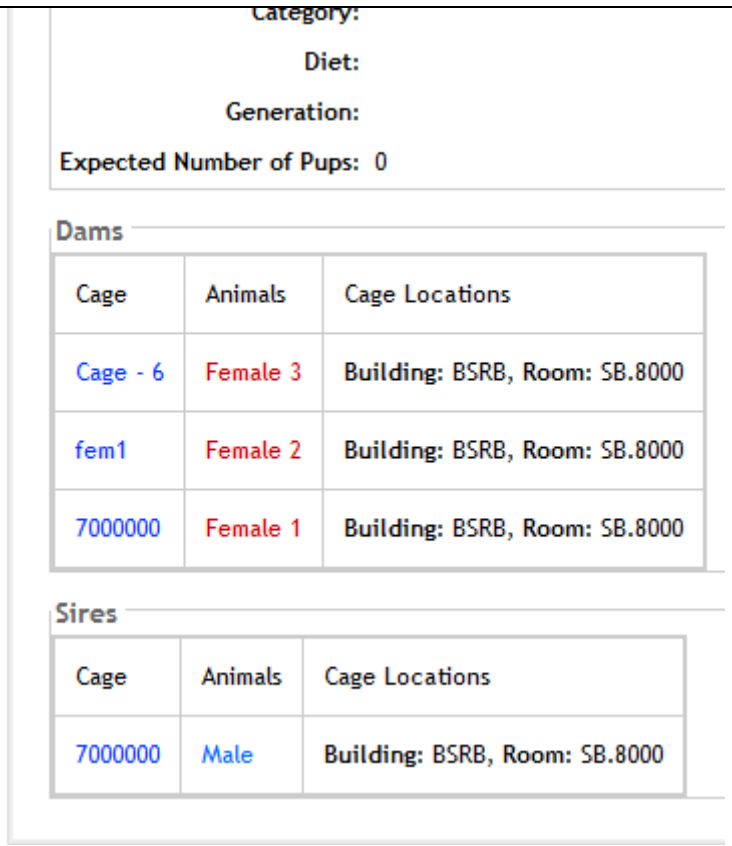
7. **Note that the females have been added**
8. **Click Save**

9. **Click on 'Please click here to review your record'**



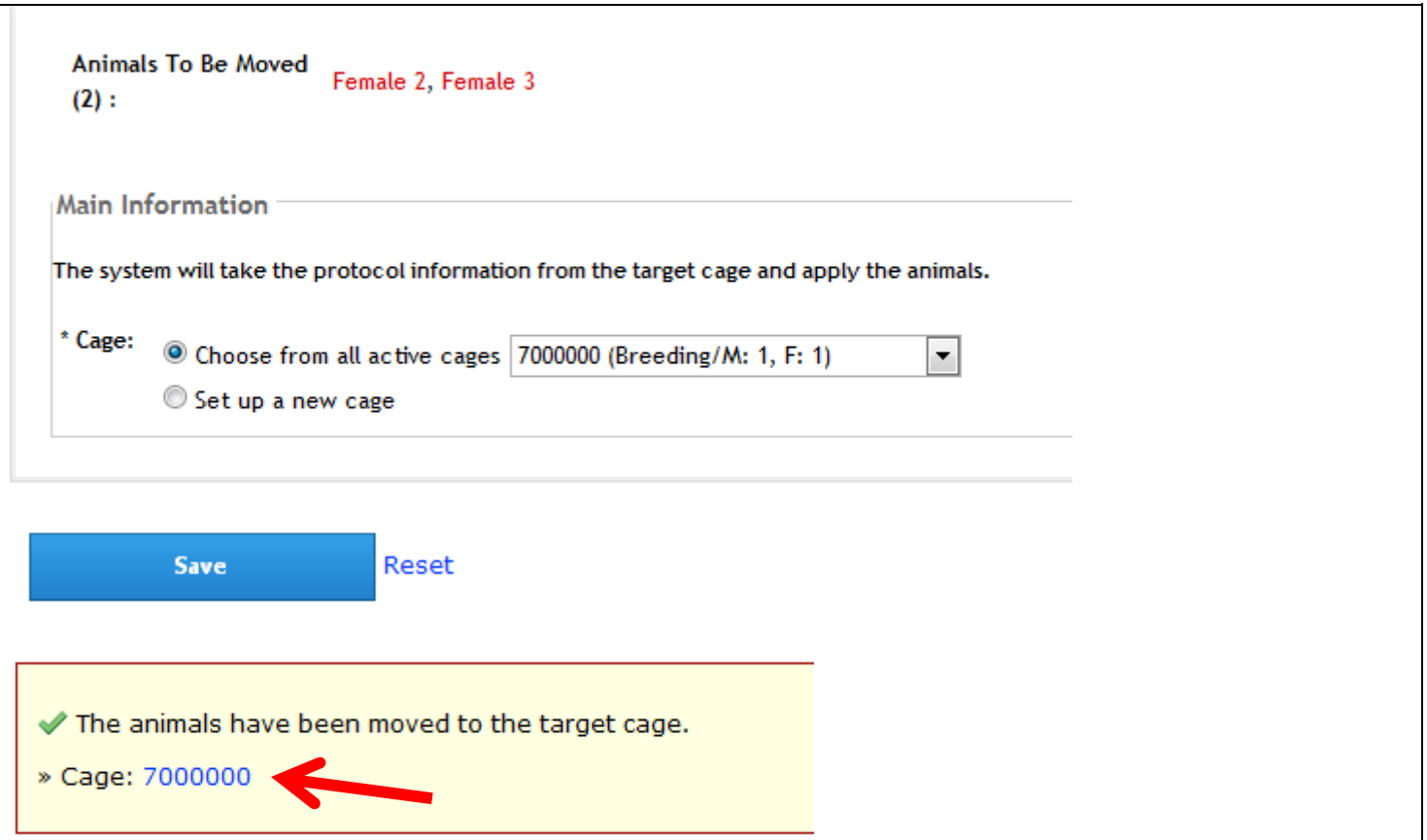
10. Note that although the females have been added to the mating, they reside in different cages

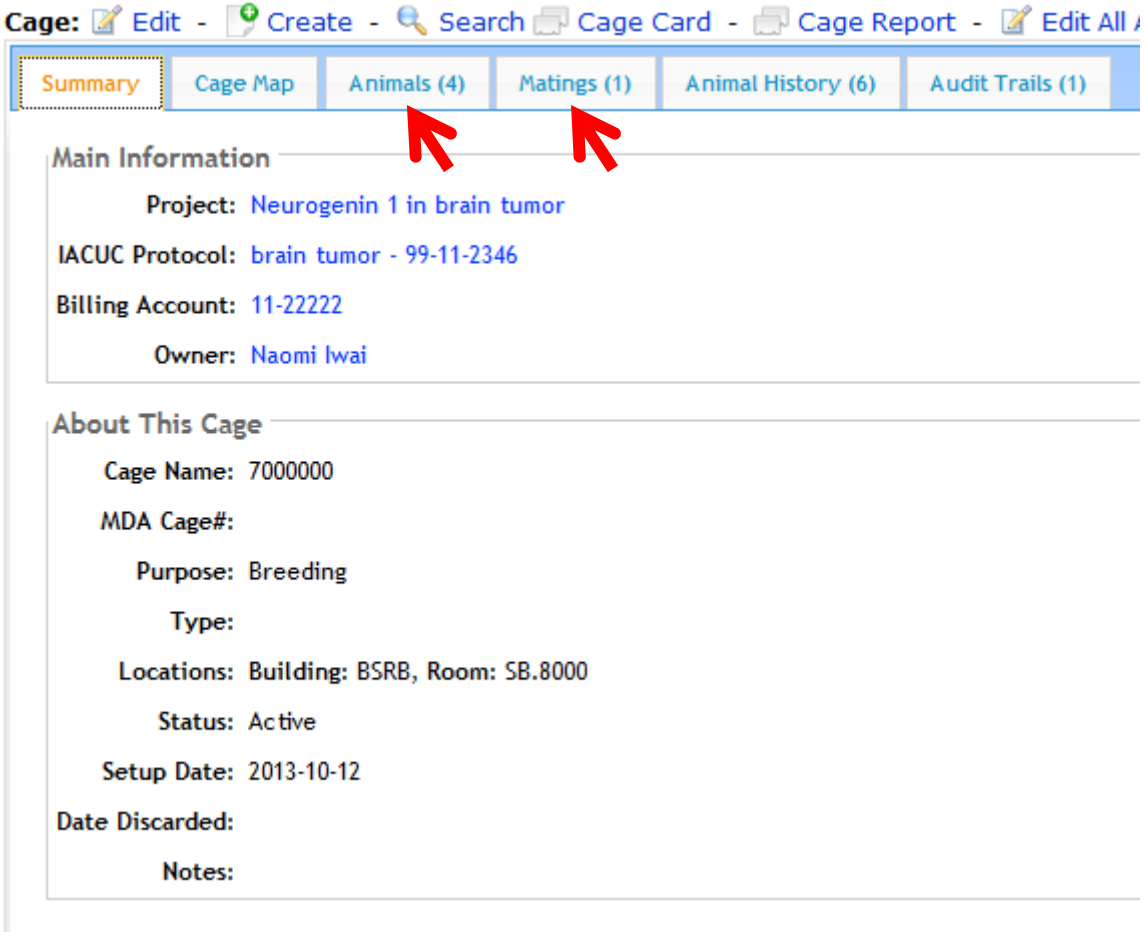
Female 2 and 3 still reside in their original cages.



11. Move the females to the breeding cage using the Move Animal button

	No.	Animal Name	Status	Sex	DOB	Owner	Cage	Cage Purpose	Genes & G
☐	1	CDF 7	Live	F	2013-08-06	Naomi Iwai	Neurogenin - 56	Breeding	**FGF8**: +/-; **N 1**: wt
☐	2	CDF 8	Live	F	2013-08-06	Naomi Iwai			**FGF8**: +/+; **Neurogenin**
☐	3	CDF 9	Live	F	2013-08-20	Naomi Iwai	cage a	Breeding	**FGF8**: +/+; **Neurogenin**
☐	4	CDF 10	Live	F	2013-10-11	Naomi Iwai	cage a	Breeding	
☐	5	Female 1	Live	F	2013-08-20	Naomi Iwai	7000000	Breeding	**Neurogenin**
☑	6	Female 2	Live	F	2013-08-21	Naomi Iwai	fem1	Holding	**Neurogenin**
☑	7	Female 3	Live	F	2013-09-03	Naomi Iwai	Cage - 6	Holding	**Neurogenin**
☐	8	Male	Live	M	2013-08-15	Naomi Iwai	7000000	Breeding	
☐	9	male 7	Live	M	2013-10-11	Naomi Iwai	cage a	Breeding	

12. Click on Cage link to review cage information	

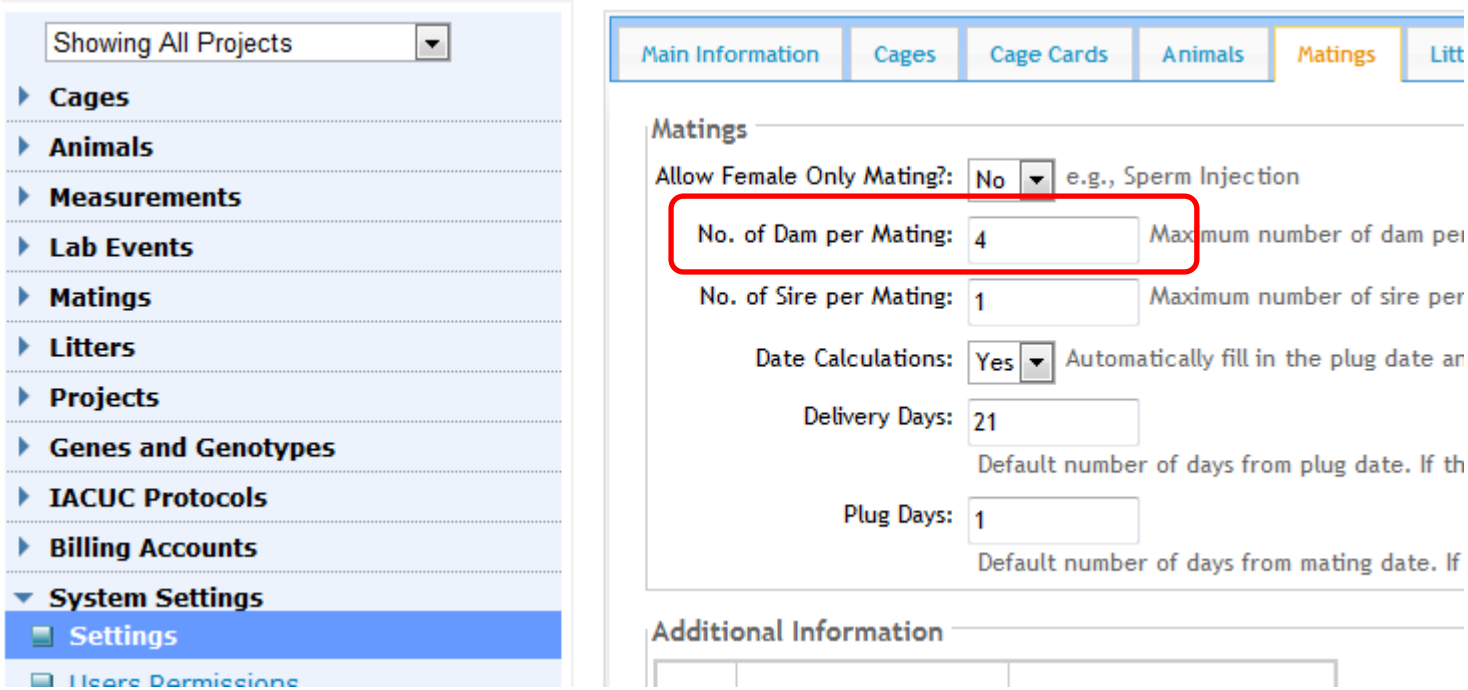
13. Click on Animals tab and Matings tab to confirm that the added females now reside in the breeding cage and are part of the mating	

Summary
Cage Map
Animals (4)
Matings (1)
Animal History (6)
Audit Trails (1)
No. Animal Name Status Sex DOB Owner Cage Cage Purpose
1. Male Live M 2013-08-15 Naomi Iwai 7000000 Breeding
2. Female 1 Live F 2013-08-20 Naomi Iwai 7000000 Breeding
3. Female 2 Live F 2013-08-21 Naomi Iwai 7000000 Breeding
4. Female 3 Live F 2013-09-03 Naomi Iwai 7000000 Breeding
Summary
Cage Map
Animals (4)
Matings (1)
Animal History (6)
Audit Trails (1)
No. Mating Parents Status Cage Mating Date
1. Test Mating 1 Male, Female 1, Female 2, Female 3 Active 7000000 2013-10-12

Note:

To set up a mating with more than one dam, make sure that the No. of Dam per Mating in System Settings > Settings >Matings is set accordingly.

The system will not allow matings with multiple dams if the number of dams exceeds the maximum number set up in Settings.



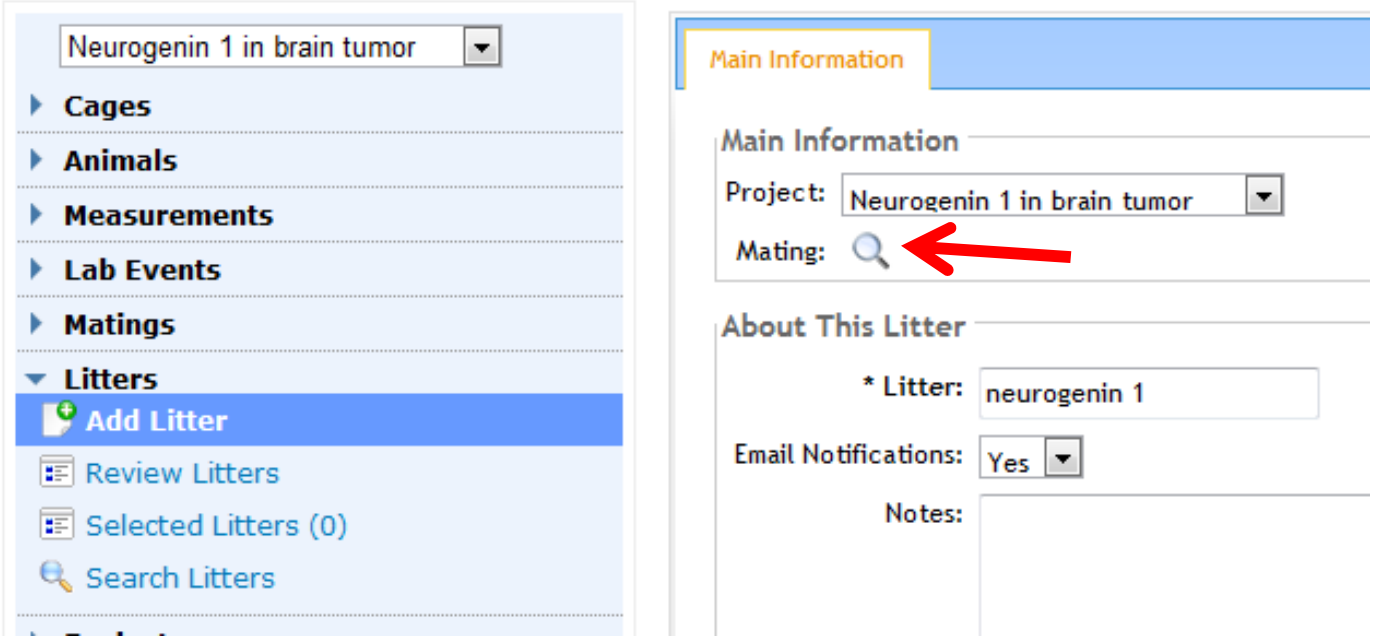
Add Litter and Pups

There are two possible ways to create a litter.

Method 1

In Litters, select Add Litter

In this method, you will have to select the mating from the magnifying glass icon list



Method 2

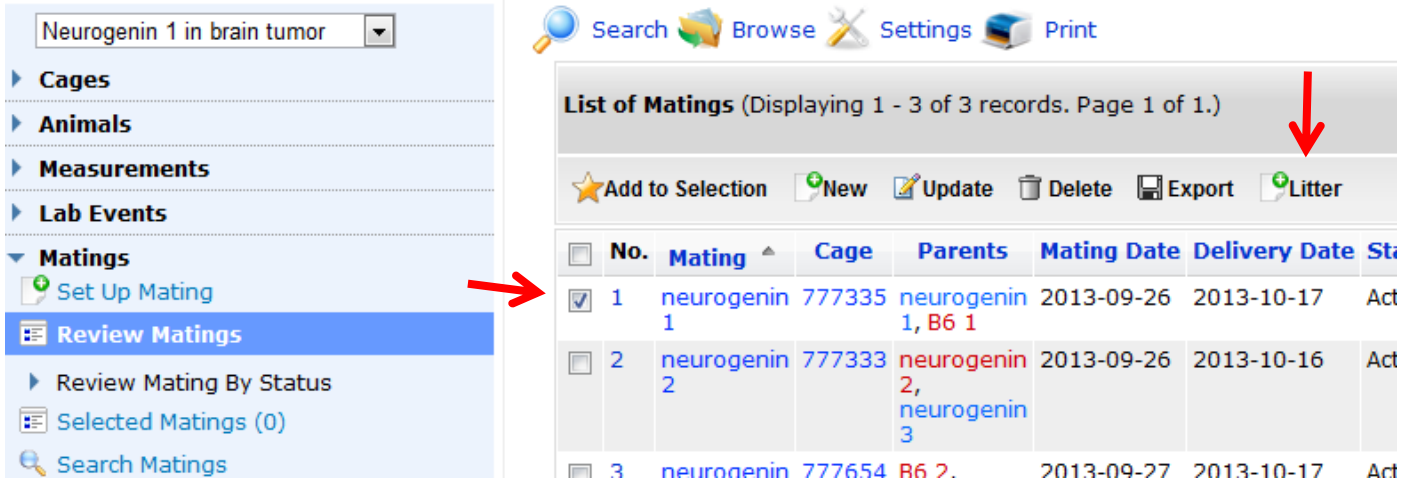
Select a Mating first and add litter

In Matings> Review Matings:

Select mating by checking the check box, then click on Litter button

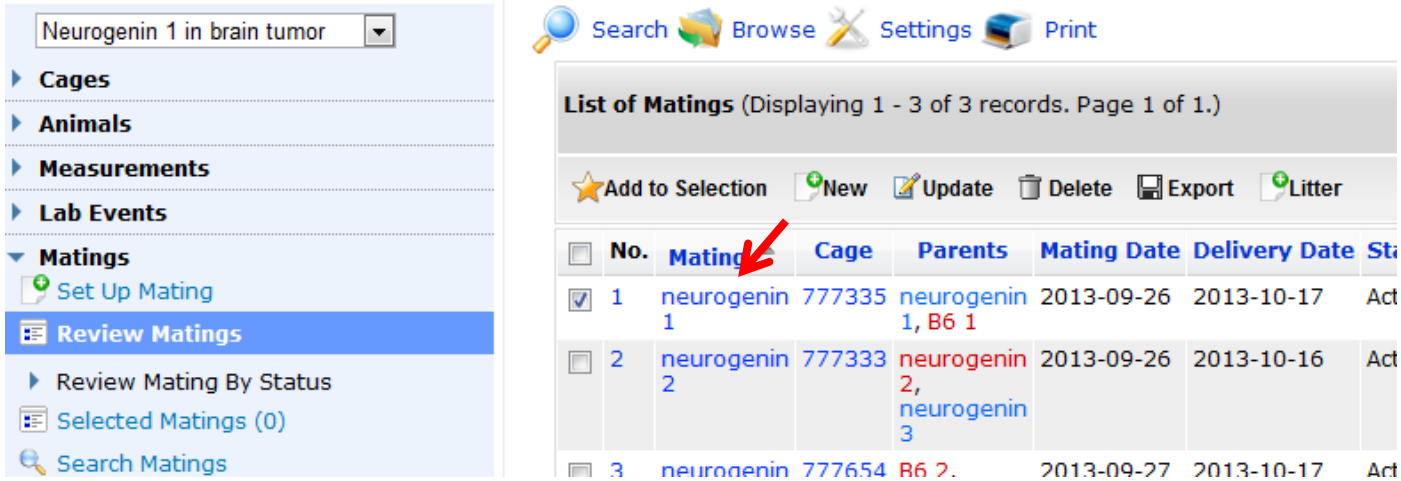
OR:

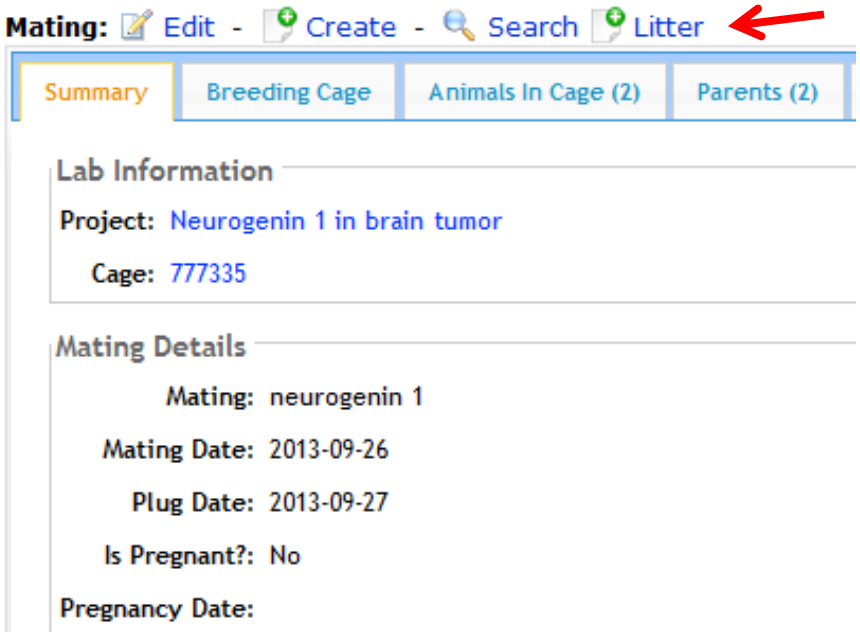
Click on the mating name, which



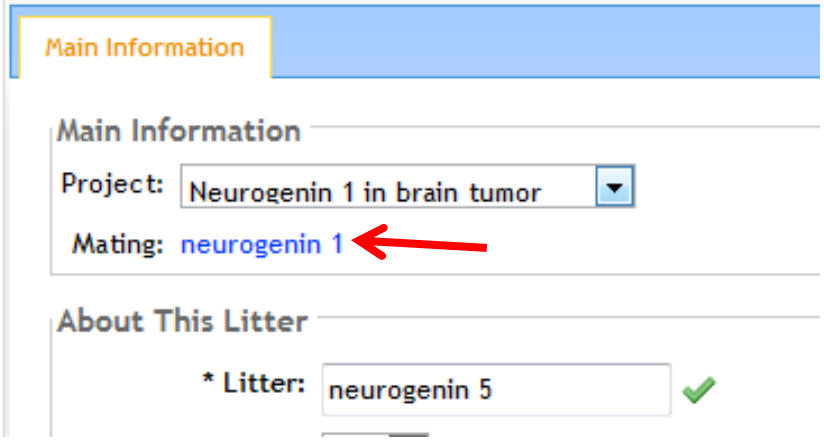
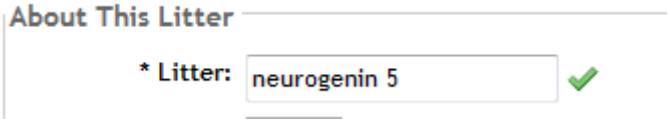
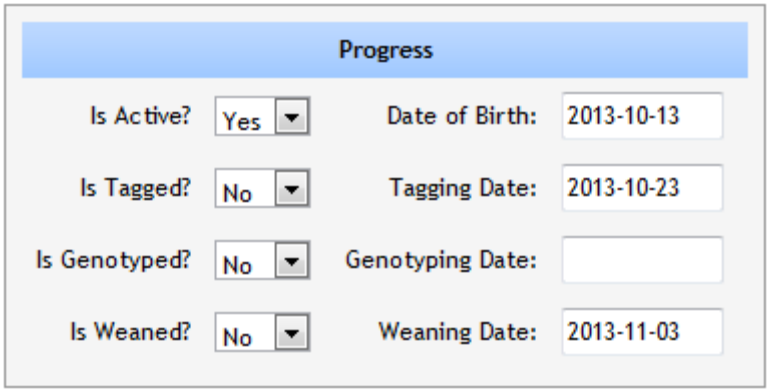
takes you to the Mating Information window.

Click on Litter button





This way the mating has already

been selected.	
Once in Add Litter window and mating has been selected, **1. Create Litter Name** A litter name is mandatory and has to be unique in the lab (there cannot be two identical litter names in the same lab).	
2. In Progress box, enter Date of Birth (by default DOB will be today) **3. Enter Tagging Date, Genotyping Date and Weaning Date if applicable** Entry of these dates is optional. You may choose to leave them blank and later fill in when you perform these	

tasks. But if you want email reminders, you have to enter the dates. Note that if you set up Tagging Days and Weaning Days in your Project (see Section 4 Setting Up Your Projects) the scheduled Tagging Date and Weaning Date are already pre-populated	

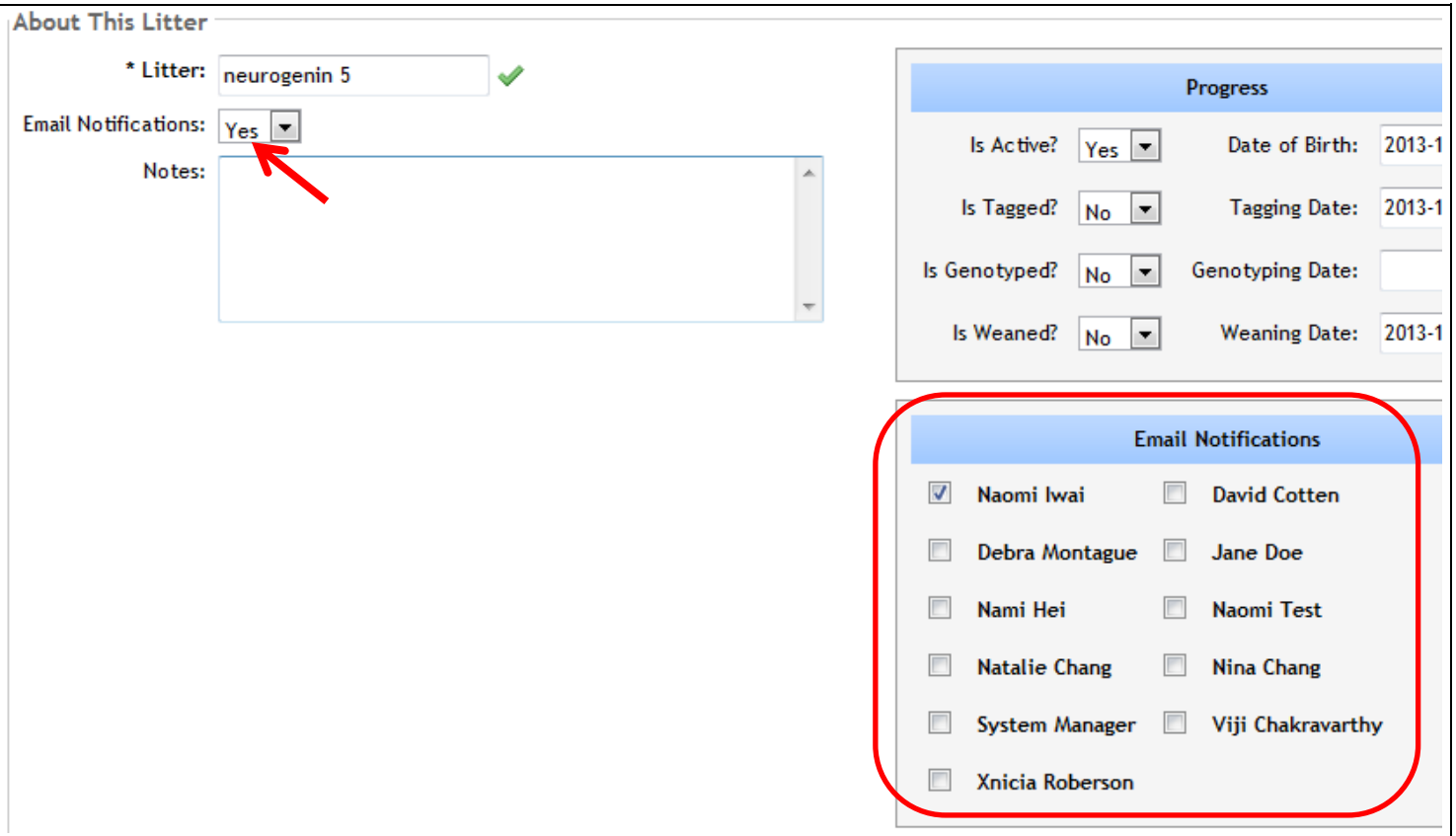
4. Set up Email Notifications

mLIMS will send you email notifications for **DOB reminders, Tagging reminders, Genotyping reminders and Weaning reminders.**

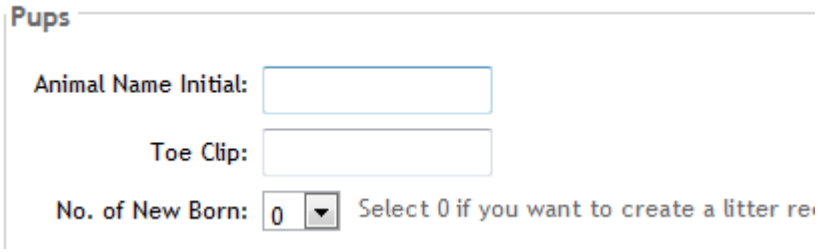
(if you don't want emails for this litter, select Email Notifications: No)

In the Email Notifications box, select the email recipients. You can choose any of your lab members.

For more information on email notifications, see below Mating & Litter Email Notifications.



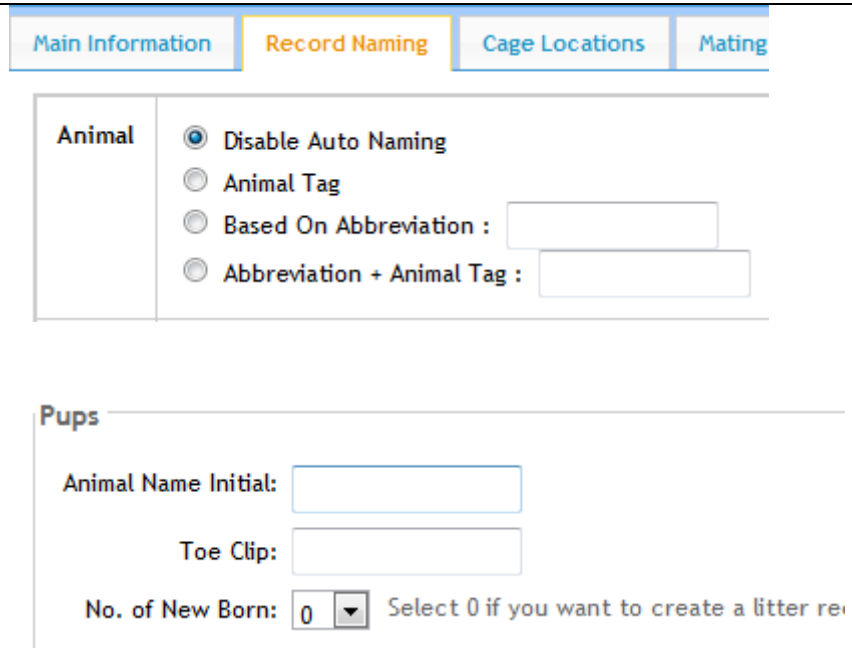
5. Enter Animal Name Initial, Animal Tag and Number of Pups



Note: You don't have to enter this information now. You can create a litter without pups (click Save without entering pup information) and later add pups.

How your pups are named will depend on the settings in your Project (see Section 4 Setting Up Your Projects: Record Naming)

If you chose 'Disable Auto Naming' for Animal Names:



Animal Name Initial field will be blank

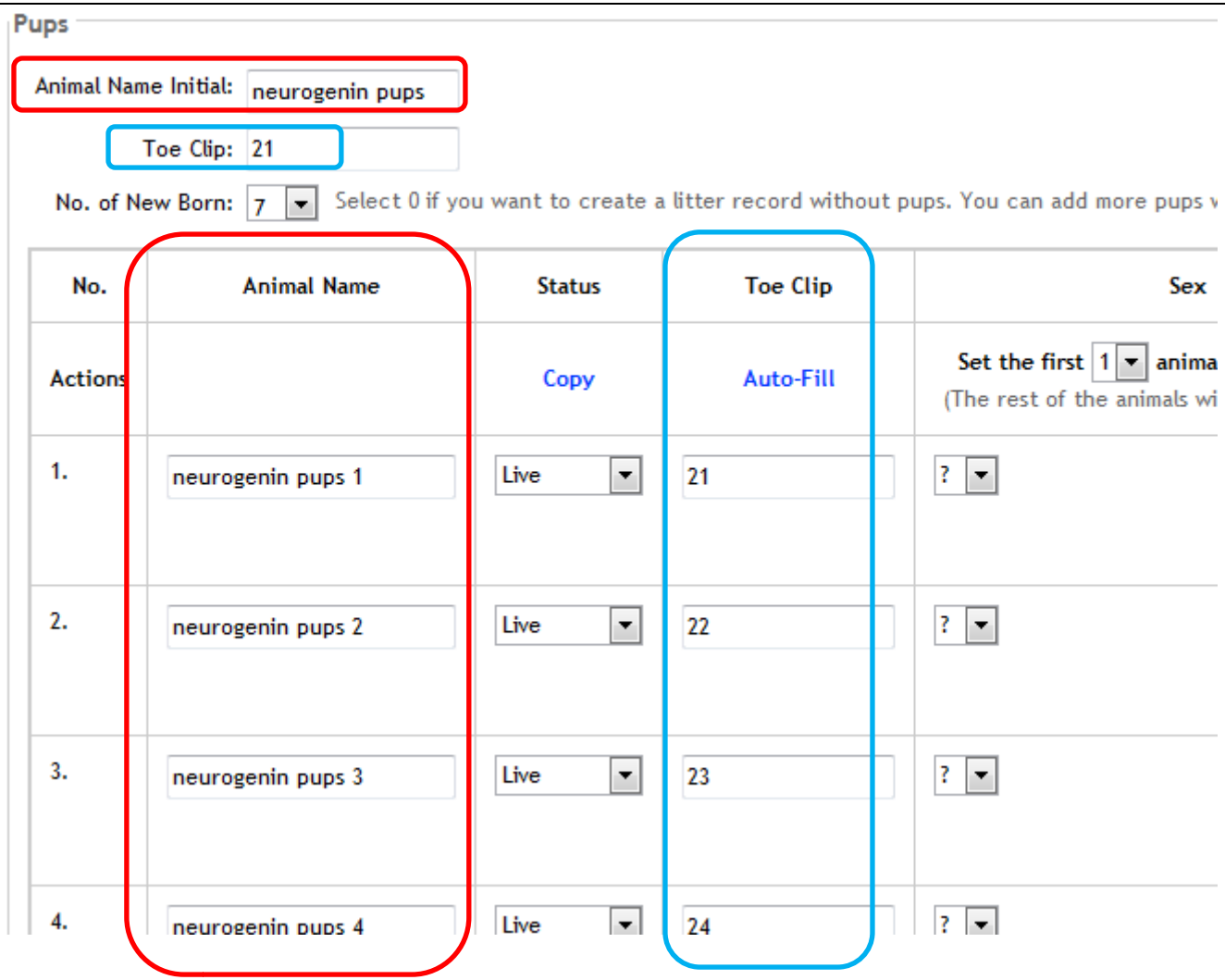
You can enter an Animal Name Initial (optional), Animal Tag start number (optional; in this example the animal tag method is Toe Clip), and the number of newborns

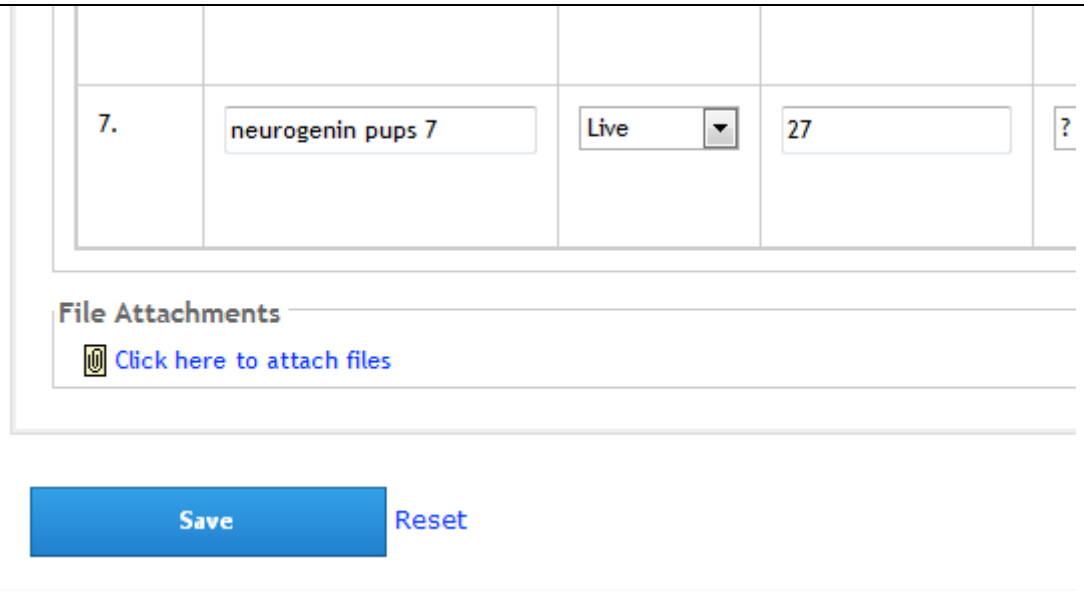
Upon entering the number of newborns:

The system will create a table with the number of pups you selected.

It will name the pups based on the initial you chose (you can leave the animal name initial blank and the system will assign numbers to the pups)

It will also auto-fill the animal tag numbers based on the start number you chose (you can leave the animal tag numbers blank and later fill in at the time of tagging)

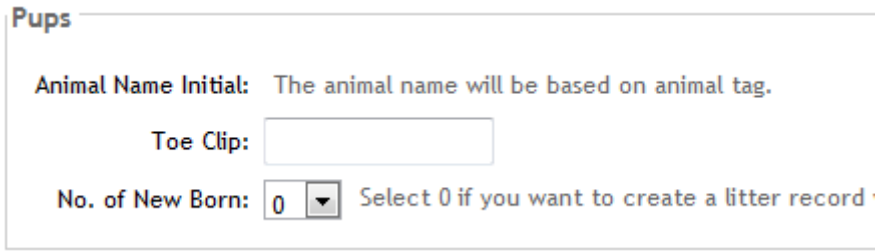

Pups
Animal Name Initial: neurogenin pups
Toe Clip: 21
No. of New Born: 7
Select 0 if you want to create a litter record without pups. You can add more pups
No.
Animal Name
Status
Toe Clip
Sex
Actions
Copy
Auto-Fill
Set the first 1 anima
(The rest of the animals wi
1. neurogenin pups 1 Live 21 ?
2. neurogenin pups 2 Live 22 ?
3. neurogenin pups 3 Live 23 ?
4. neurogenin pups 4 Live 24 ?



If you chose 'Animal Tag' for Animal Names:

Animal Name Initial field will be disabled.

Enter the start number of animal tag (you can leave this field blank and the system will create pups without names, however you

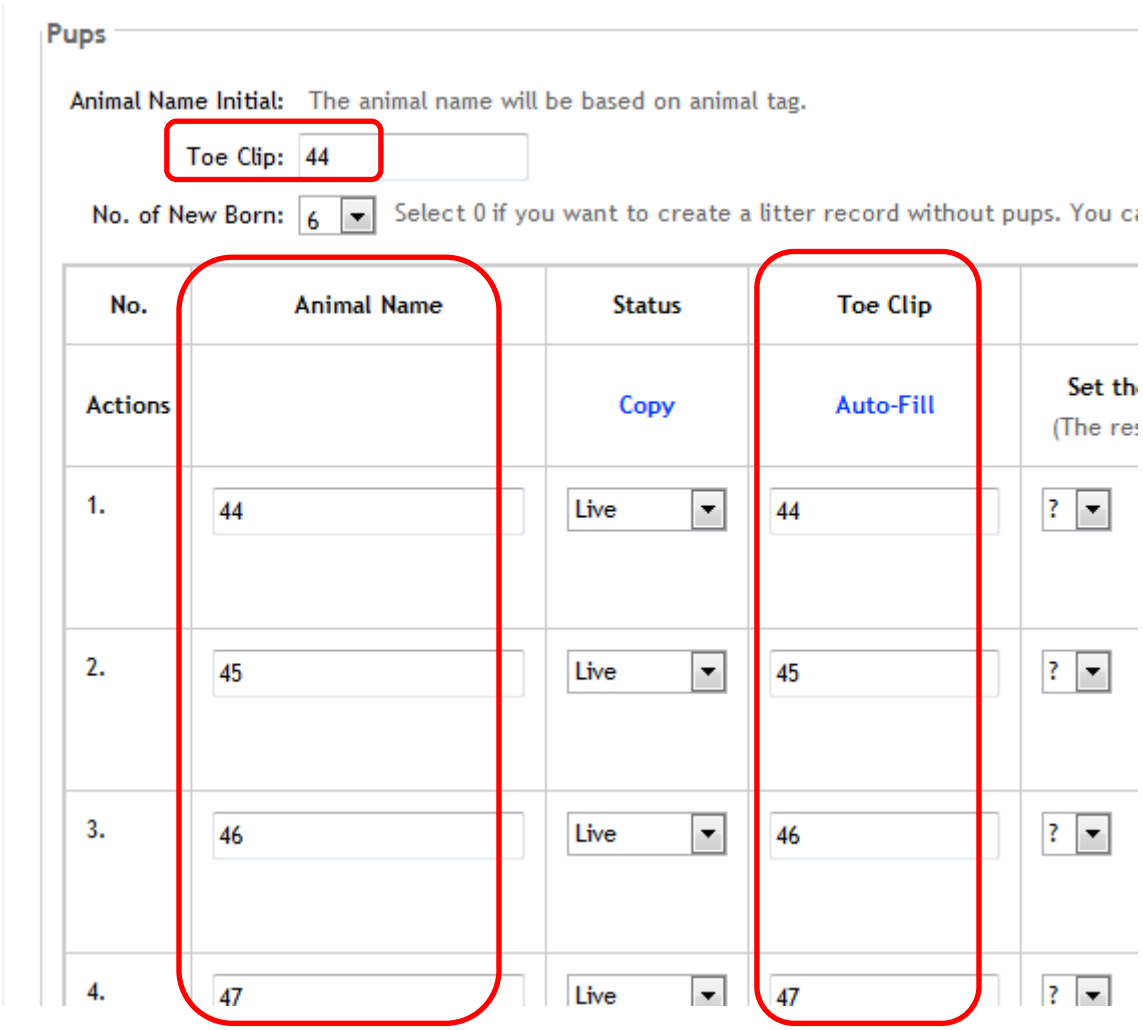

Pups
Animal Name Initial:
The animal name will be based on animal tag.
Toe Clip:
No. of New Born:
0
Select 0 if you want to create a litter record

will have to enter names before saving)

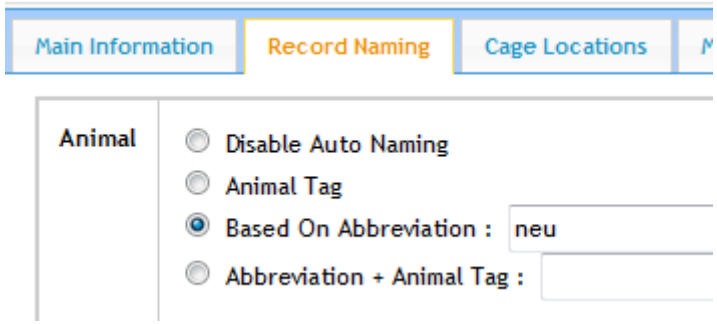
<u>Upon entering the number of newborns:</u>

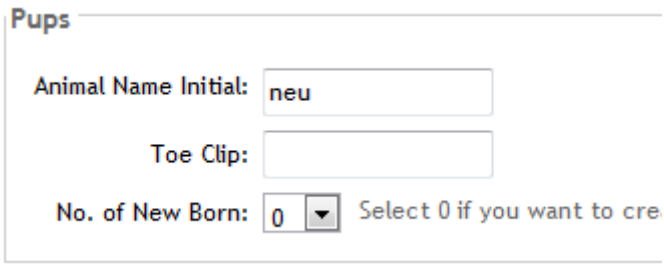
The system will create a table with the number of pups you selected.

It will name the pups based on the start number of animal tag you chose.



If you chose 'Based on Abbreviation' for Animal Names:





Animal Name Initial field will be populated with the Abbreviation you chose in Project (you can change the initial for this litter by entering a different initial).

You can enter the start number of animal tag (optional).

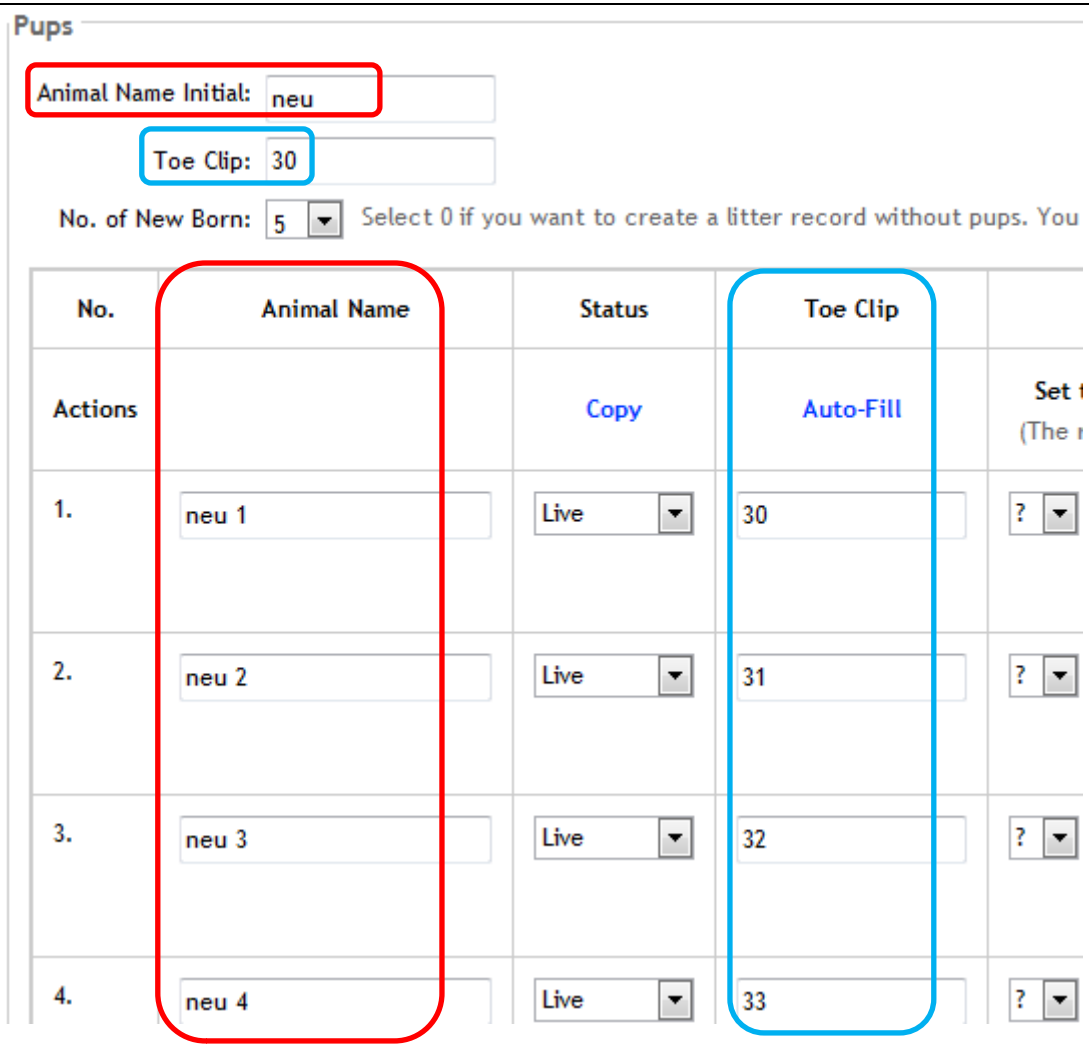
Upon entering the number of newborns:

The system will create a table with the number of pups you selected.

It will name the pups based on the animal name initial.

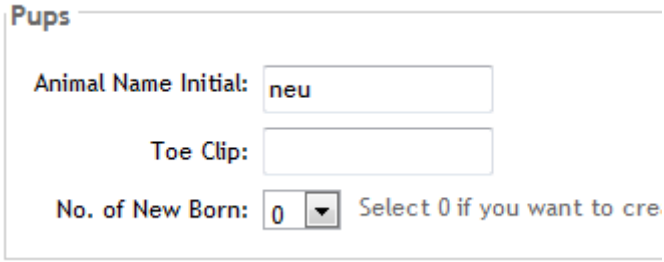
It will also auto-fill the animal tag numbers based on the start number you chose (you can

leave the animal tag numbers blank and later fill in at the time of tagging)



<u>If you chose 'Abbreviation + Animal Tag' for Animal Names:</u>

Animal Name Initial field will be populated with the Abbreviation you chose in Project (you can change the initial for this litter by entering a different initial).



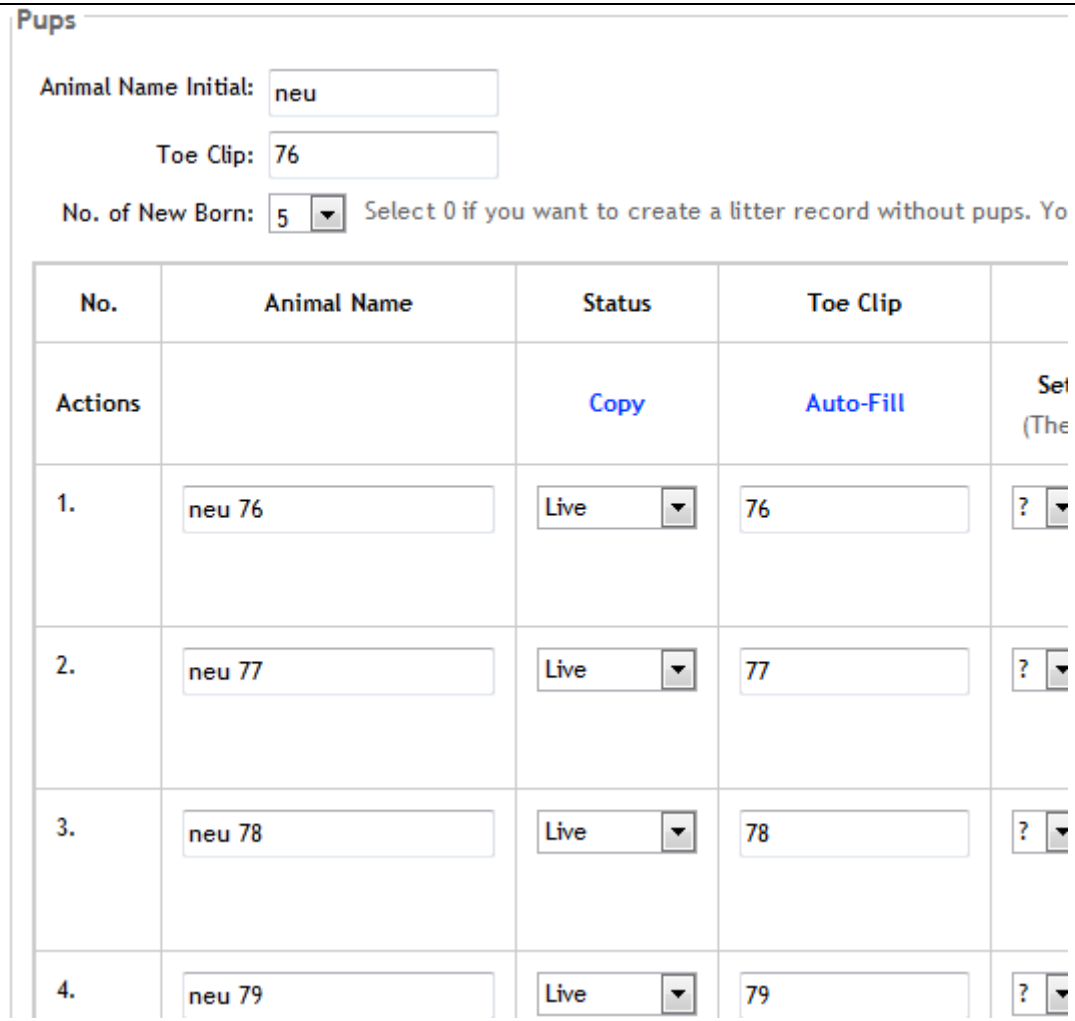
Enter the start number of animal tag (optional).

<u>Upon entering the number of newborns:</u>

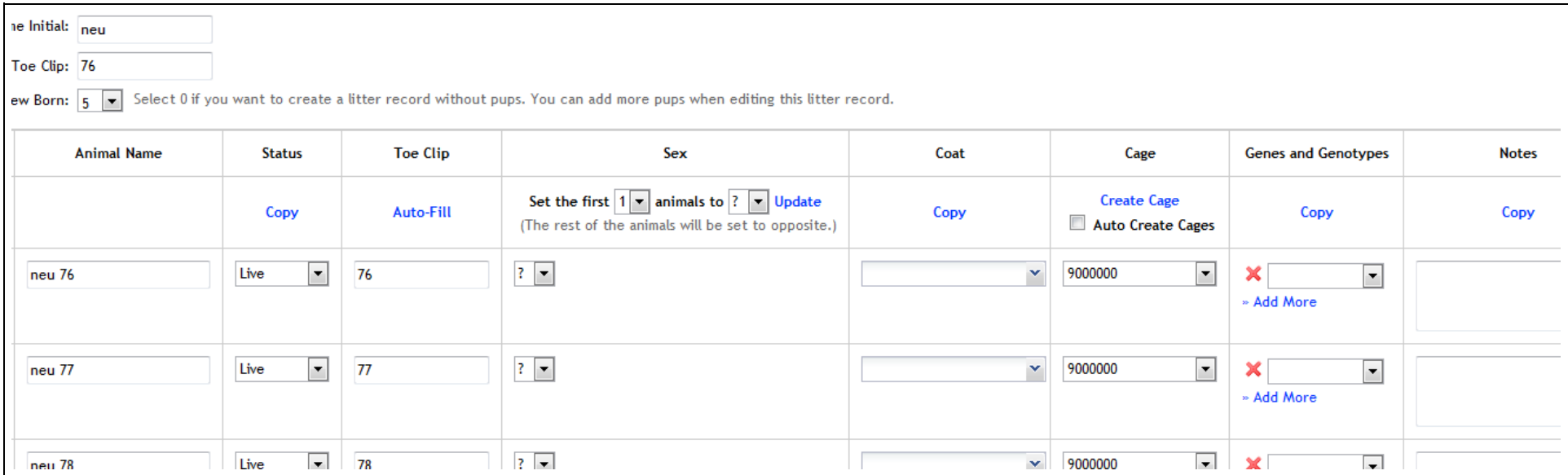
The system will create a table with the number of pups you selected.

It will name the pups based on the animal name initial and animal tag number (you can leave the animal tag numbers blank and later fill in at the time

of tagging).



6. Fill in any other information you have (e.g. Sex, Coat etc.)



7. Click Save (and the litter and pups are saved)

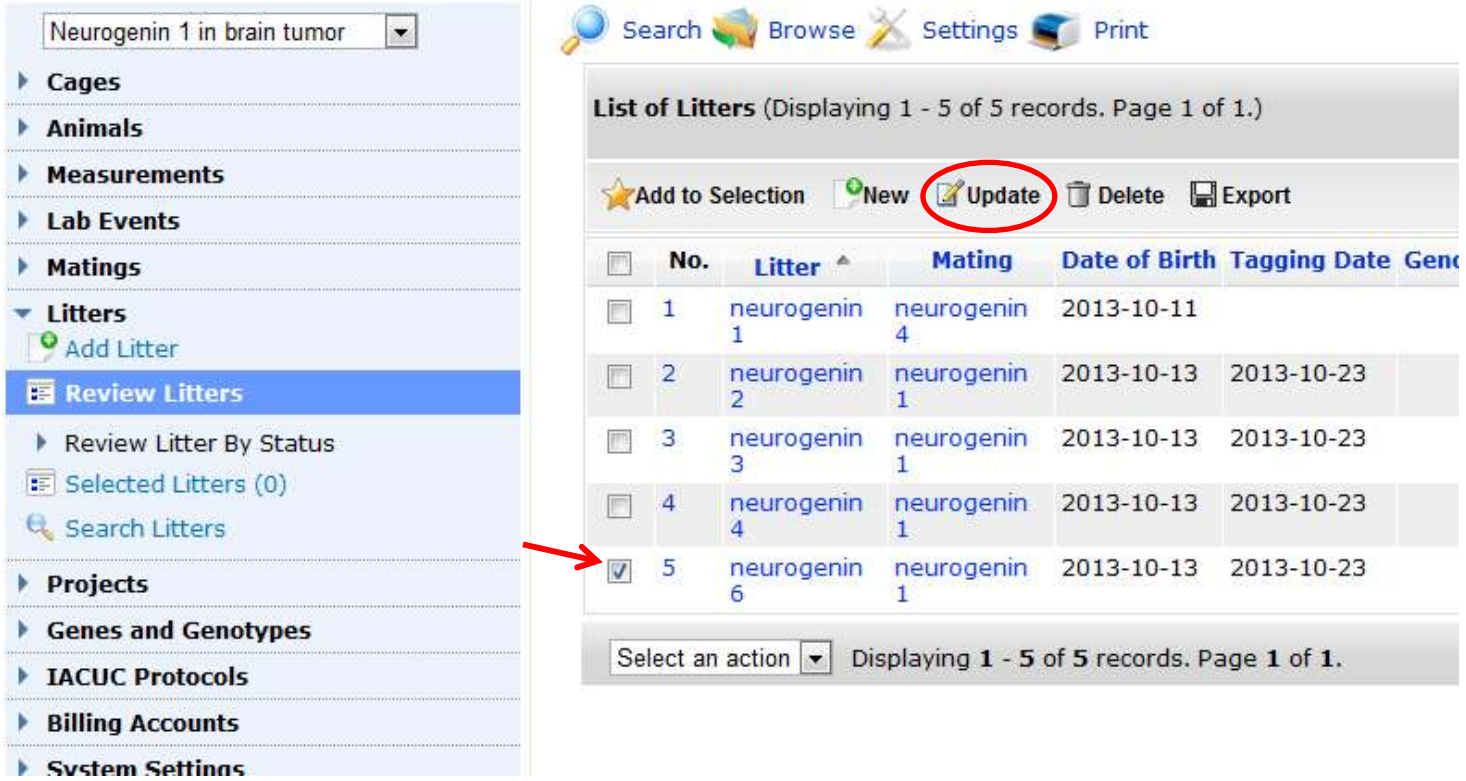
Again, you don't have to enter pup number and information. You can create a litter only and later add pups.

Update Litter: Tagging, Genotyping, Weaning

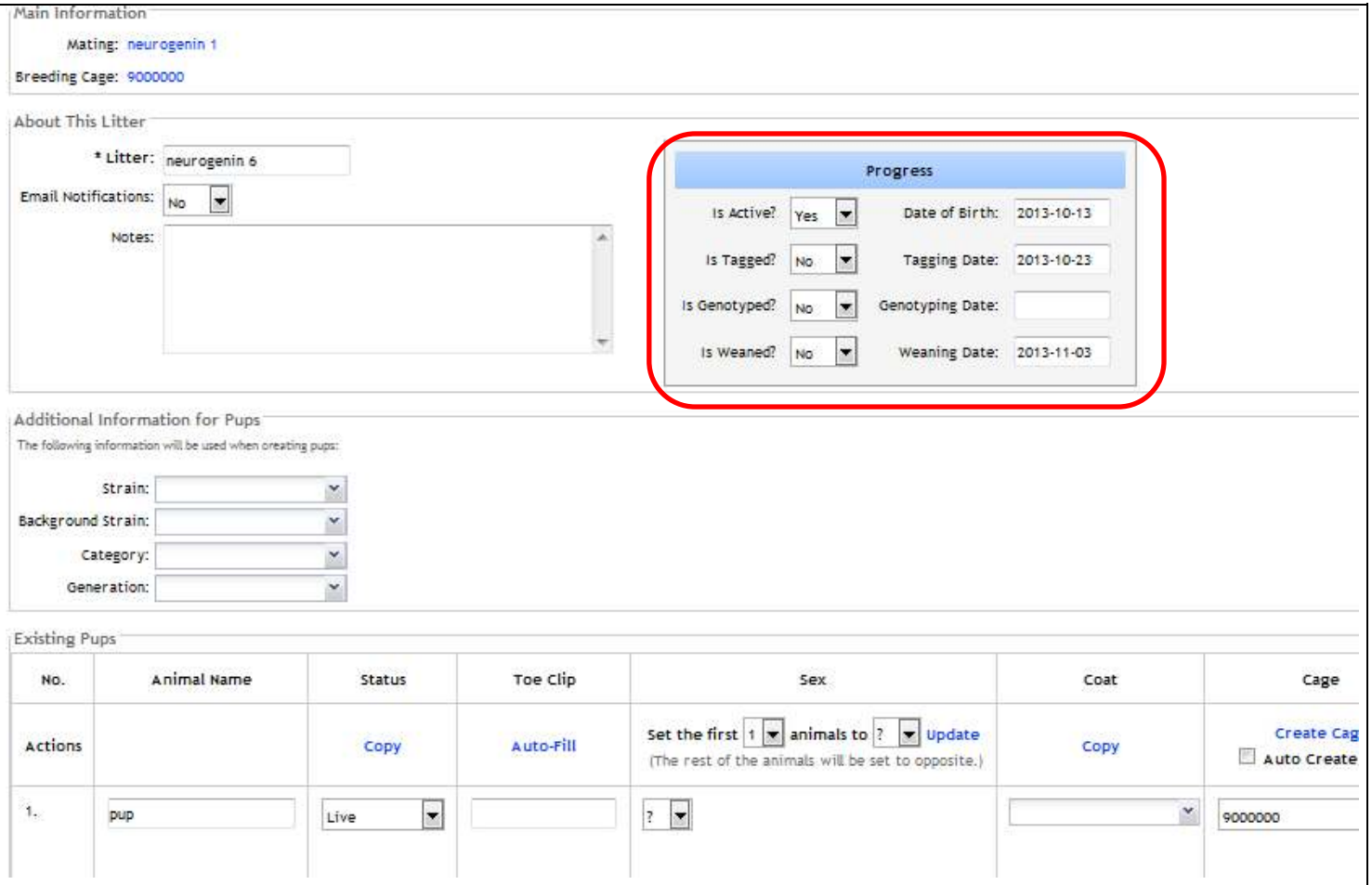
At any time you can update litter and pup information, including tagging, genotyping and weaning information.

1. **In Litters, Review Litters, select the litter you want to update by checking the check box.**
2. **Click on Update**

You can also click on the Litter Name and click Edit.



3. **Make any update in the Litter Information window.**
4. **For each update you make, make sure that the Litter Status is updated in the Progress box (for more details, see below)**



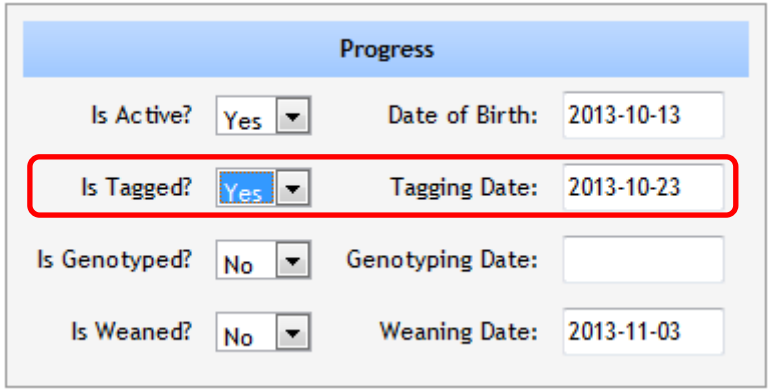
Tagging

To update and add Tagging information,

Change the status of the litter to:

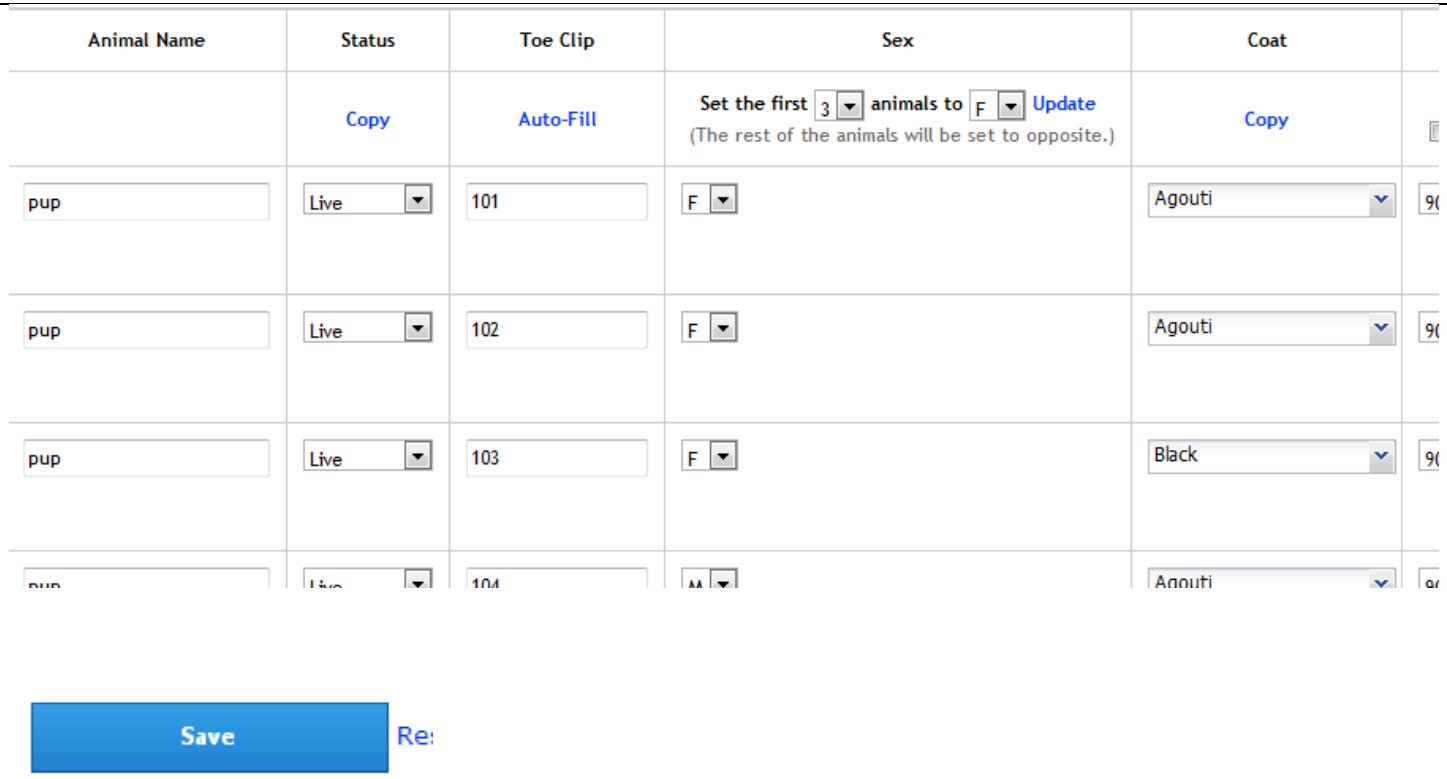
Is Tagged? Yes

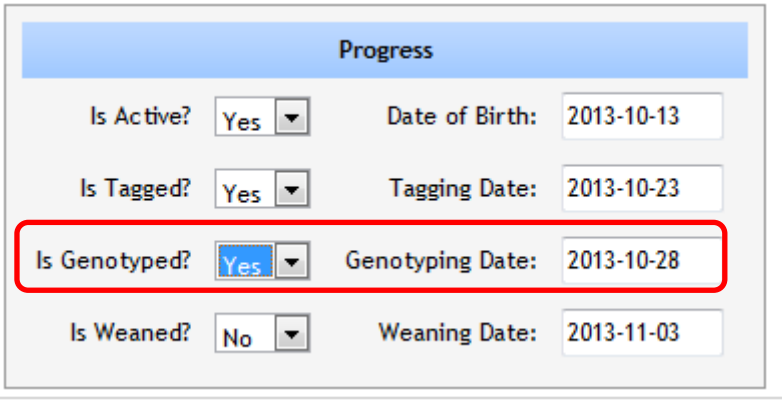
Update the Tagging Date



Enter information in Pups table such as Animal Tag Numbers, Sex and Coat color (take advantage of the Auto-Fill, Auto-Update and Copy functions)

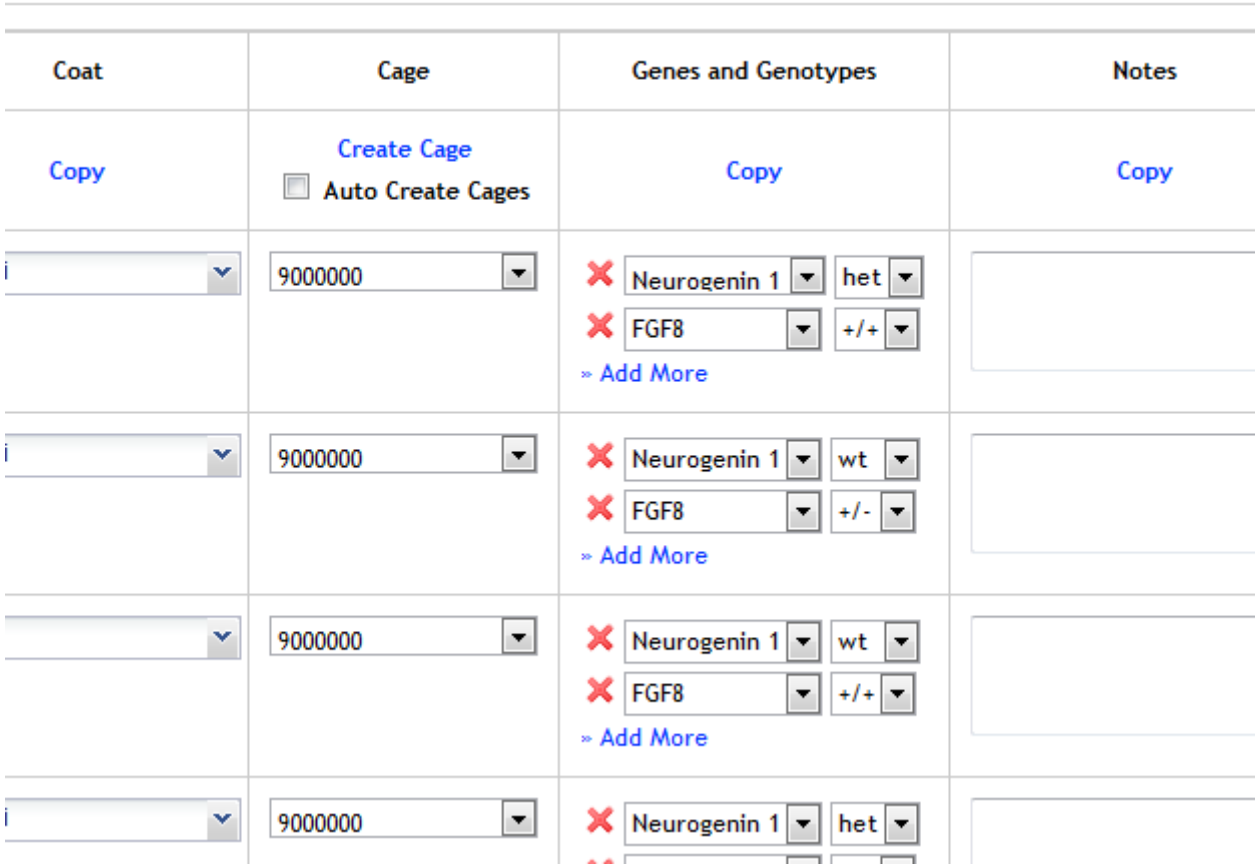
Click Save



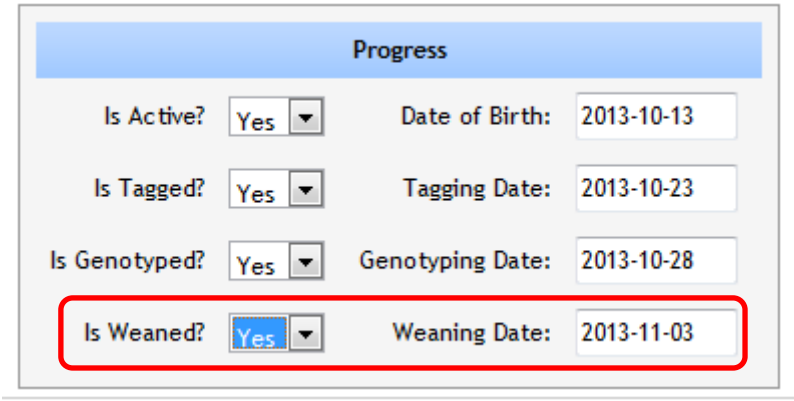
Genotyping	
To update and add Genotyping information, Change the status of the litter to: **Is Genotyped? Yes** **Update the Genotyping Date**	

Enter information in Pups table, Genes and Genotypes column (take advantage of the Copy function)

Click Save



Weaning

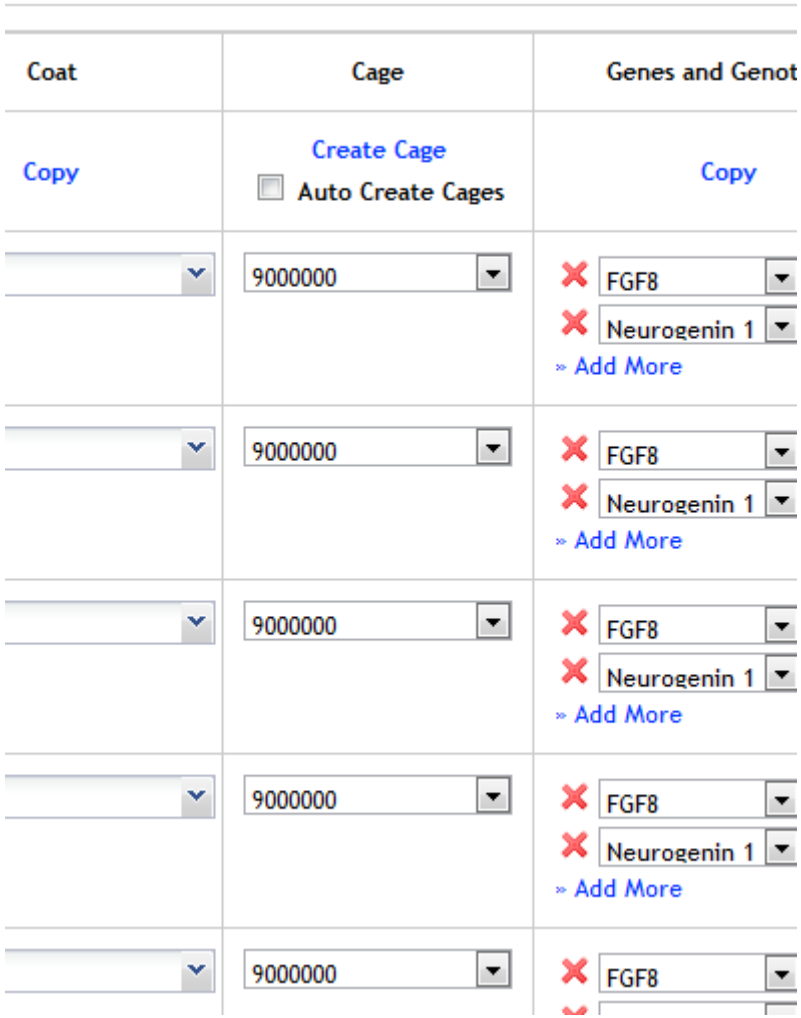
To update and add Weaning information, Change the status of the litter to: **Is Weaned? Yes** **Update the Weaning Date**	

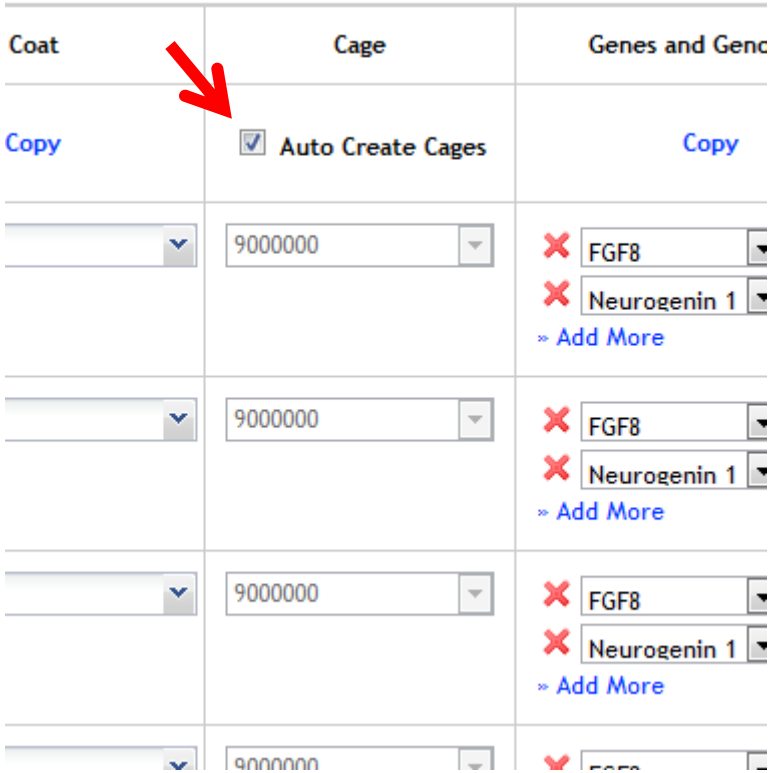
To wean, you have three options in the Cage column of Pups table.

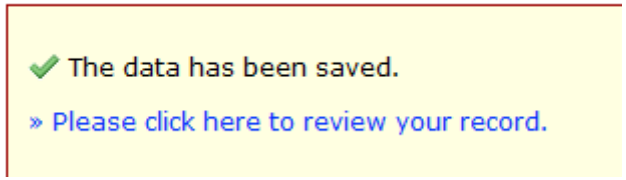
Option 1) Auto Create Cages (the system will automatically create weaning cages and distribute females and males)

Option 2) Create Cage (you will create the weaning cages and distribute females and males)

Option 3) Choose from existing cages in drop down list and distribute females and males



Option 1) Auto Create Cages **Check the check box Auto Create Cages and click Save.**	
Click on 'Please click here to review your record'.	

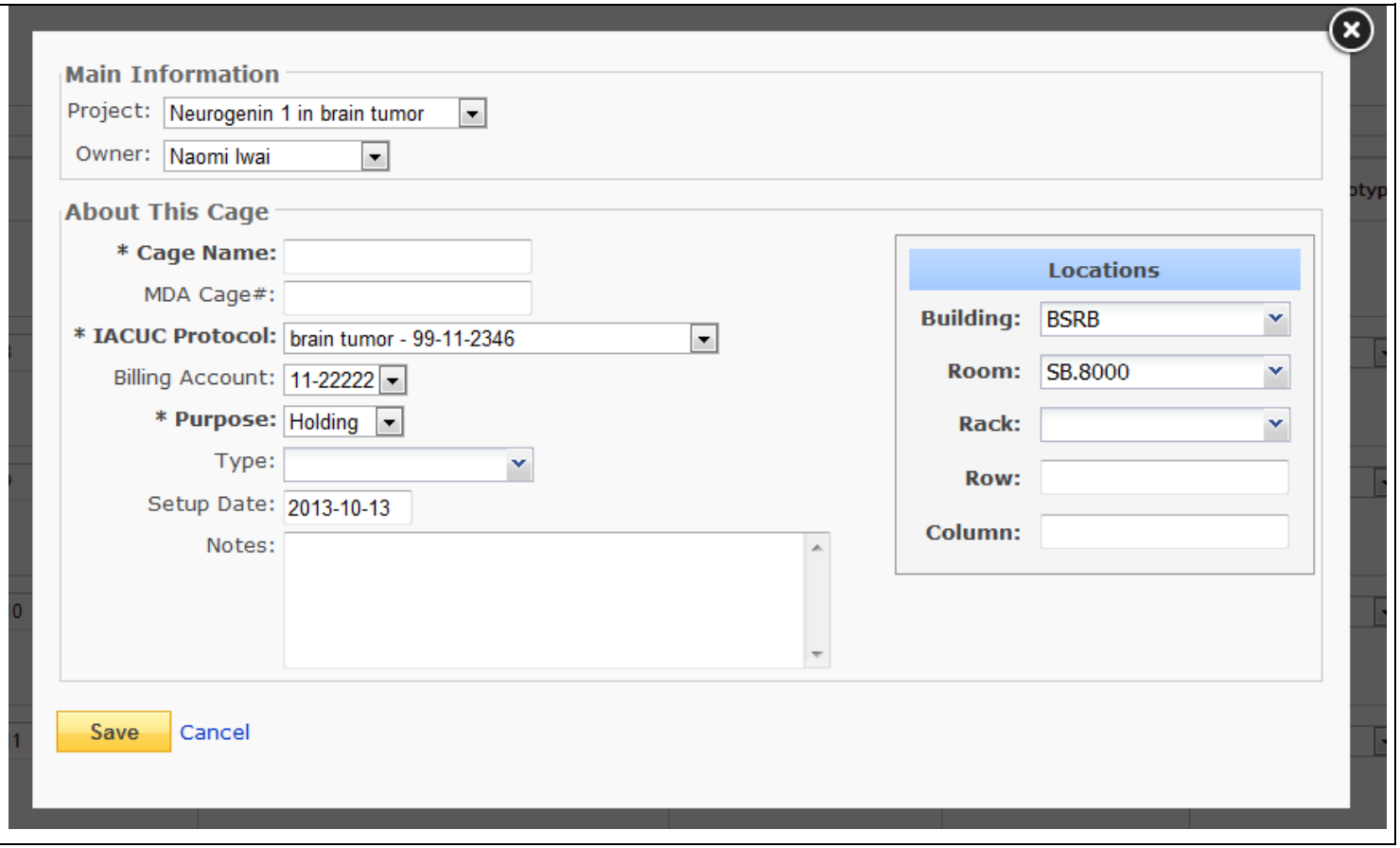
	
Review your litter: in Pups tab, confirm that females and males have been distributed correctly to weaning cages.	**Litter:** Edit - Create - Search Summary | Pups (7) | Cages (2) | Mating | Breeding Cage | Parents (2) | Audit Trails (4)

No.	Animal Name	Status	Sex	DOB	Owner	Cage	Cage Purpose	Genes &
1.	pup	Live	F	2013-10-13	Naomi Iwai	Cage - 7	Holding	FGF8: +/+; N 1: het
2.	pup	Live	F	2013-10-13	Naomi Iwai	Cage - 7	Holding	FGF8: +/-; N 1: wt
3.	pup	Live	F	2013-10-13	Naomi Iwai	Cage - 7	Holding	FGF8: +/+; N 1: wt
4.	pup	Live	M	2013-10-13	Naomi Iwai	Cage - 8	Holding	FGF8: +/+; N 1: het
5.	pup	Live	M	2013-10-13	Naomi Iwai	Cage - 8	Holding	FGF8: +/+; N 1: het
6.	pup	Live	M	2013-10-13	Naomi Iwai	Cage - 8	Holding	FGF8: +/+; N 1: het
7.	pup	Live	M	2013-10-13	Naomi Iwai	Cage - 8	Holding	FGF8: +/+; N 1: het

Option 2) Create Cage

Click on Create Cage

Create Cage window displays. Enter information and Save.

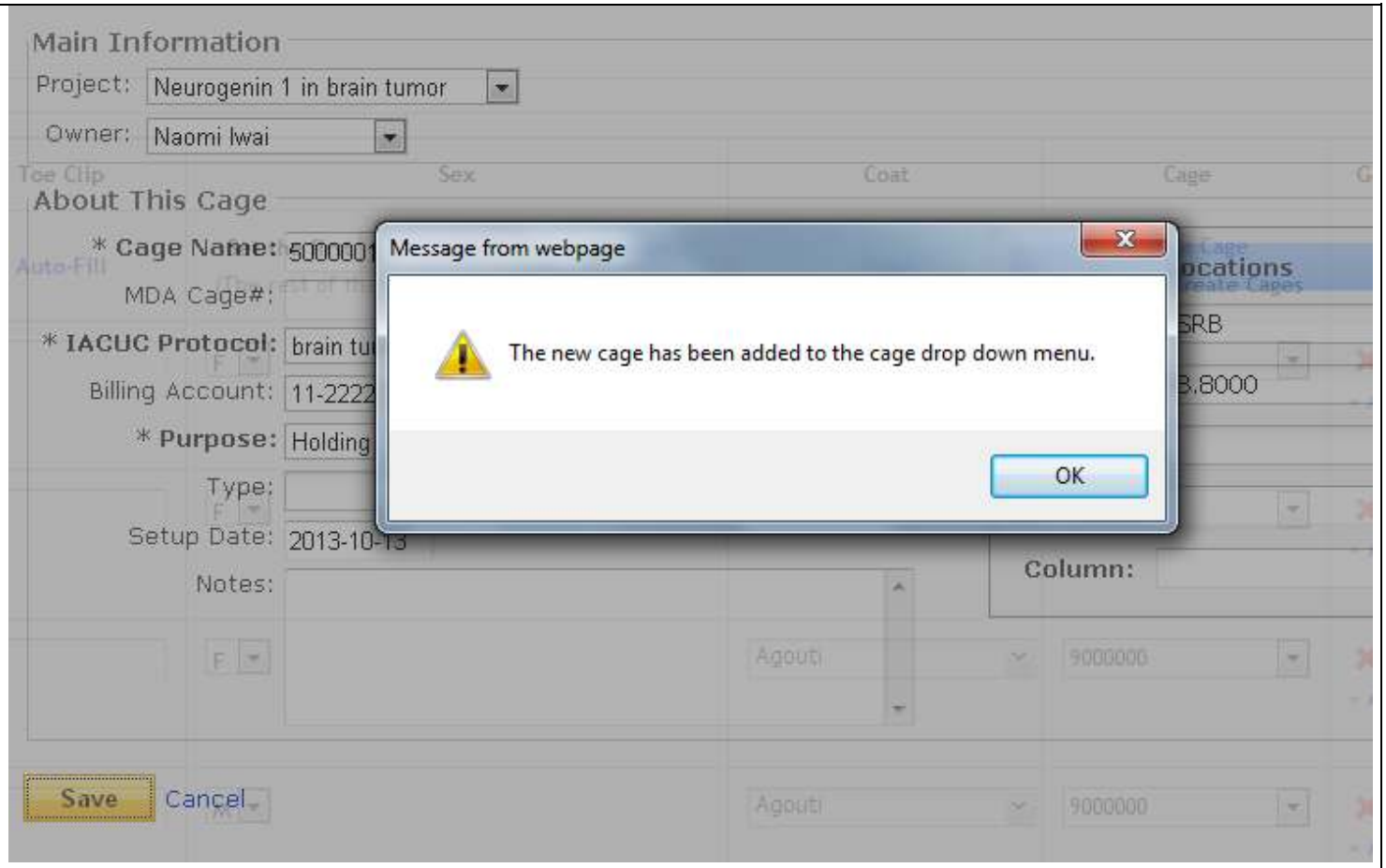


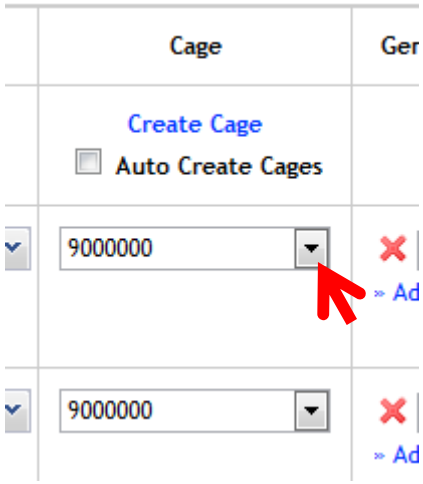
A message displays:

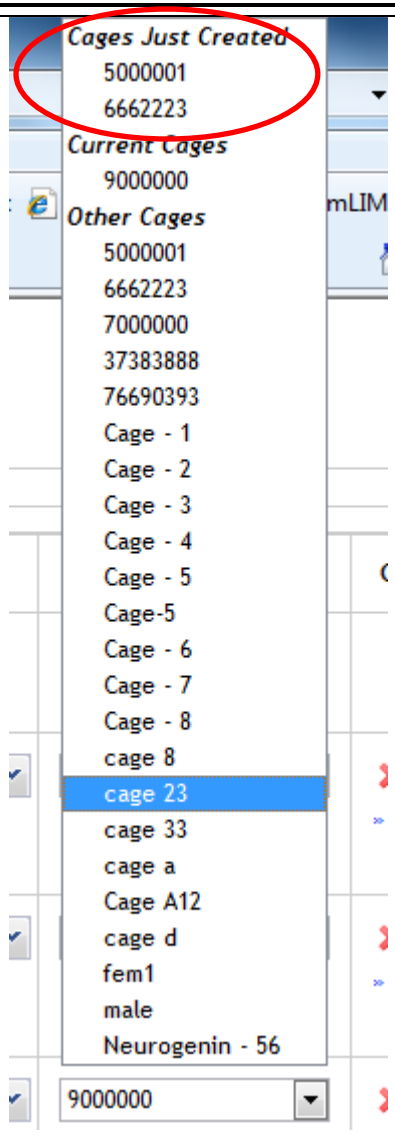
The new cage has been added to the cage drop down menu

Click on OK

(Create all weaning cages you need)

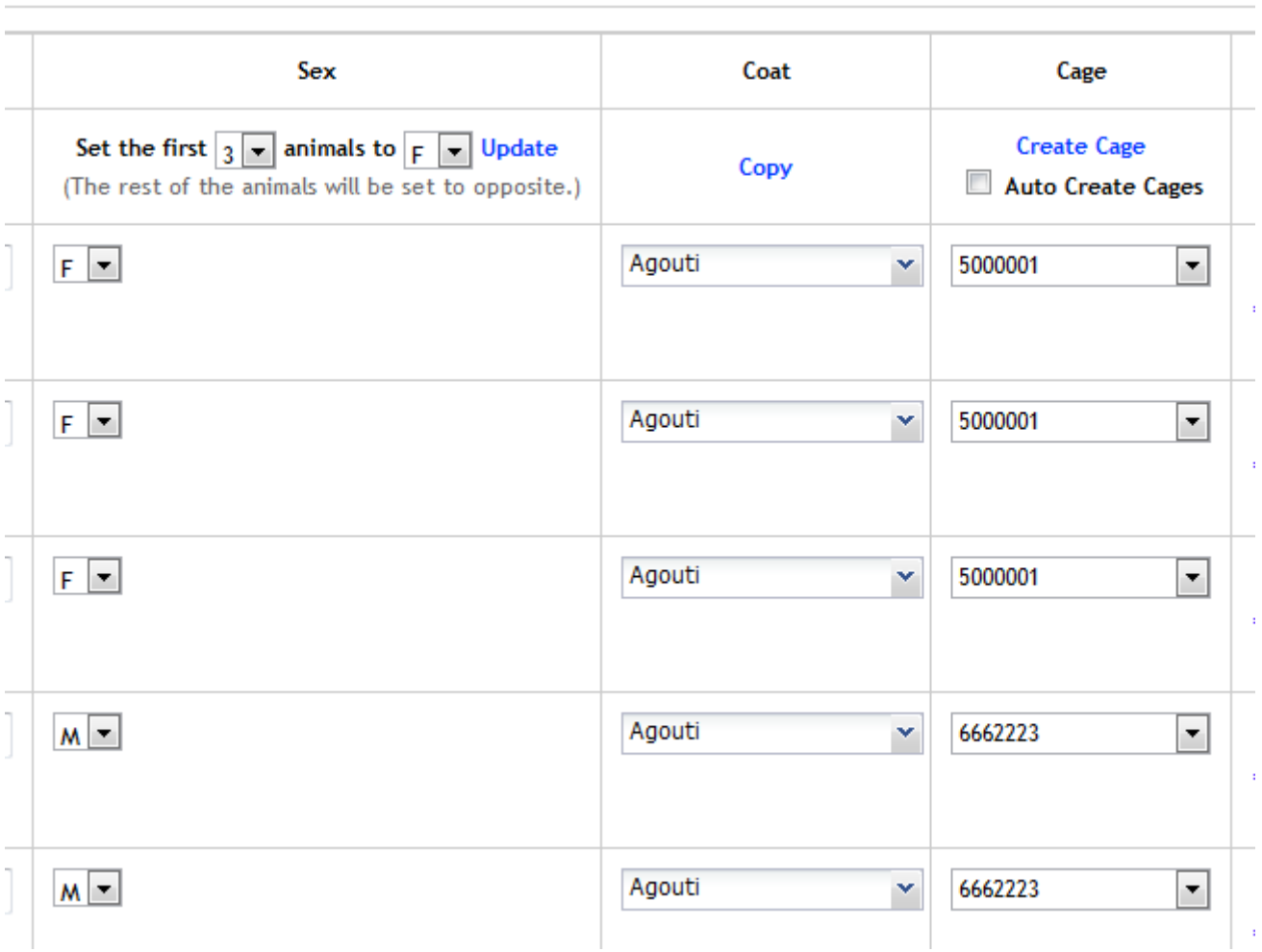


Click on arrowhead in cages drop down menu	

You will see the cages you just created.	

For each pup, select the weaning cage (from the cages you just created)

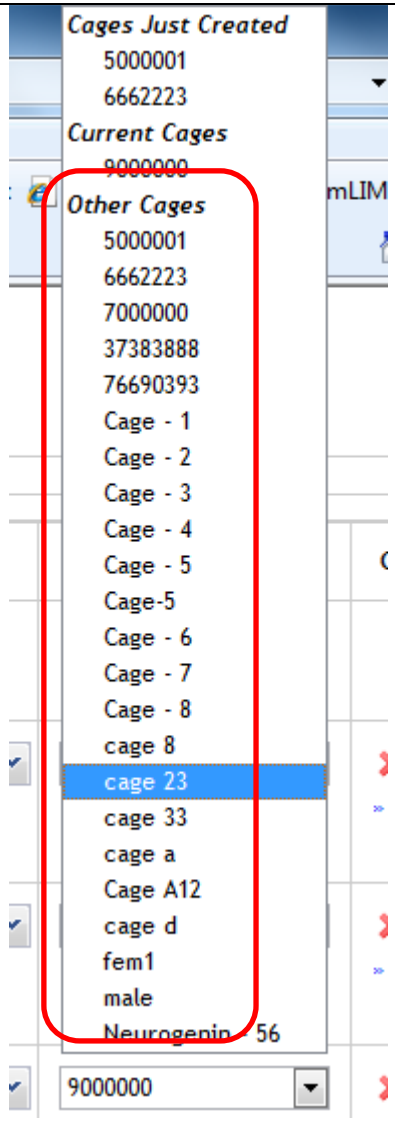
Click Save (and pups will be assigned to the selected cages)



Option 3) Choose from existing cages in drop down list and distribute females and males

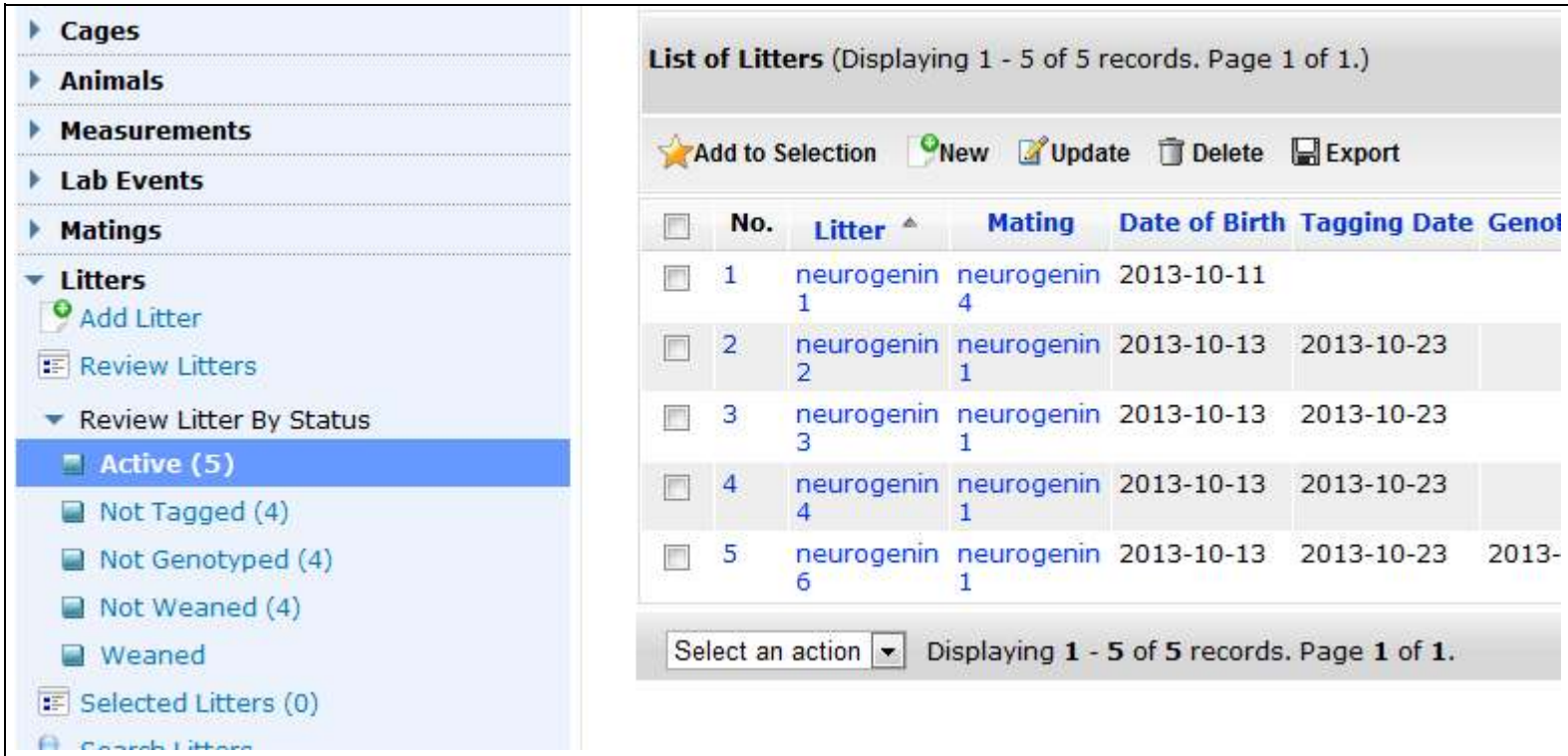
For each pup, select a weaning cage from the list of existing cages (Other Cages) in drop down list.

Click Save (and pups will be assigned to the selected cages)

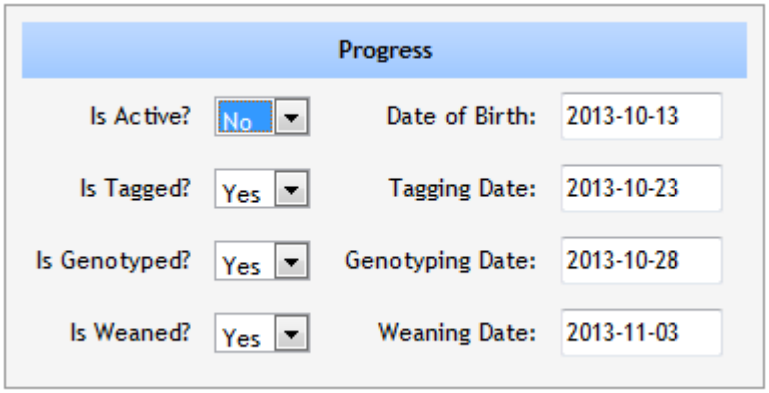


Review Litter by Status:

In left hand menu, Litters, you can review your litters by Status (Active, Not Tagged, Not Genotyped, Not Weaned, Weaned). By default when you click on Review Litters, you will see Active litters.



Note: When you are done with a litter (pups are weaned and you do not need to view litter information anymore) change the Status to Not Active:



You will not see the litter anymore under Active Litters.

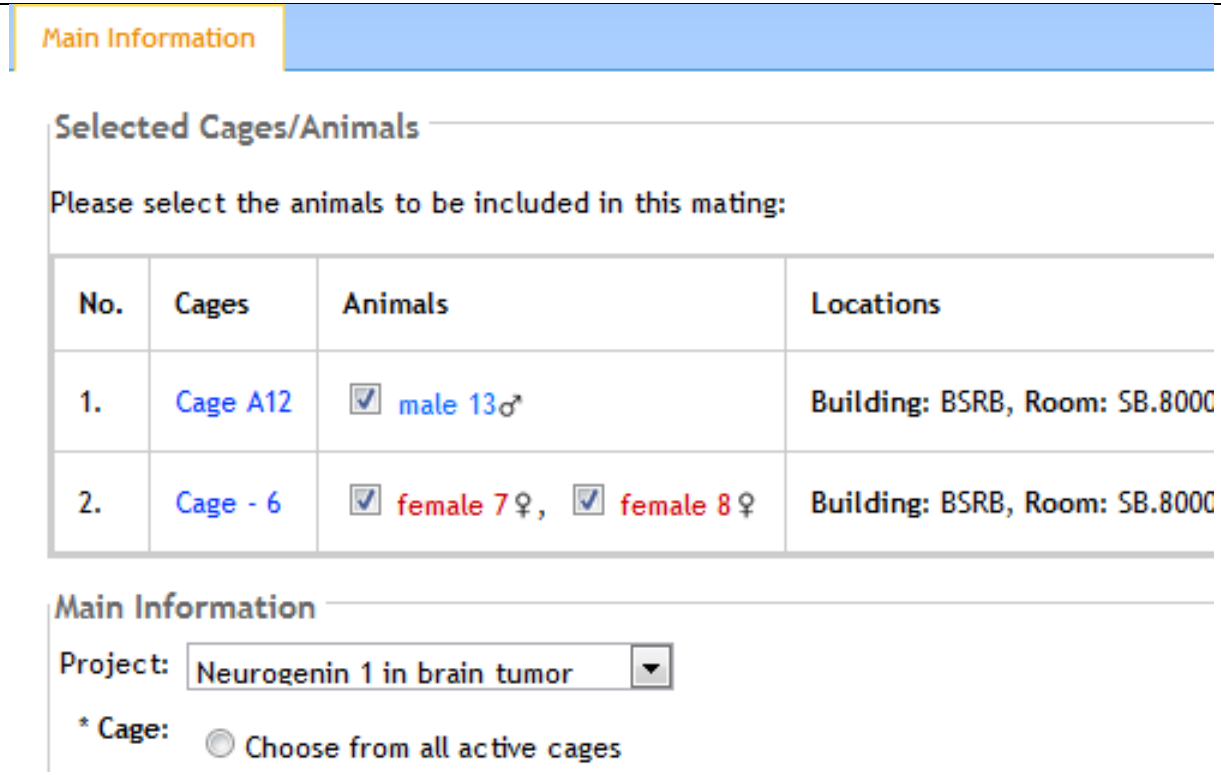
Do not Delete a litter (unless it is an erroneous record).

Trio Matings And Litters

You can create trio matings (one male vs two females) and harem matings (one male vs three or four females) in mLIMS. Make sure you record the litters for each female correctly: the following instructionsexplain a trio mating scenario,but the same instructions apply to harem matings.

Set up a trio mating (see above Set Up Mating: select two females in a mating)

You can also add a female to an existing one male vs one female mating (see above Add Female To Existing Mating)



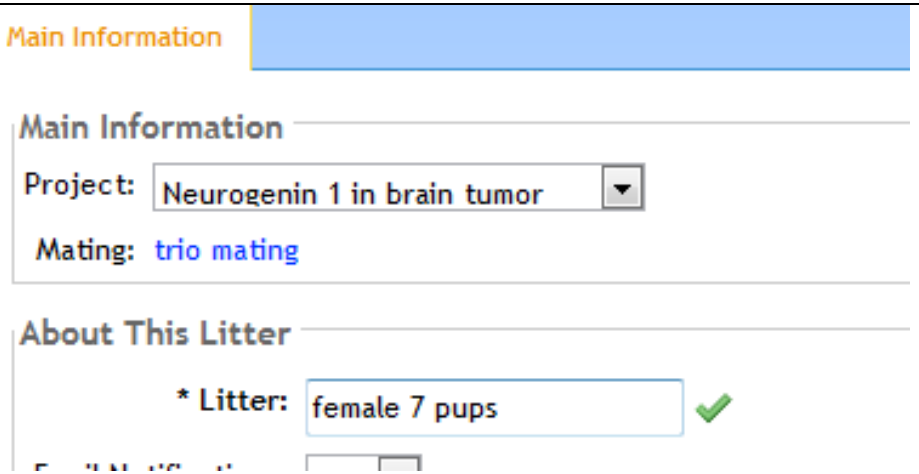
In the example above, let's assume *female 7* is pregnant and you want to move her to a separate cage

1. **Move pregnant female (*female 7*) to a separate cage using the Move Animal function**

(see Section 5 Animals: Move Animals)	
Review Animal Information of *female 7*: *female 7* is now alone in a separate Breeding cage (you may want to mark Cage Type as Nursing) Click on Matings tab: Note that *female 7* is still part of the mating, although she is in a different cage. **<u>Keep her in this mating</u>**(so that when pups are born, the system knows who the father is). <u>Animals do not have to be in the same cage to be part of a mating</u>	**Animal:** Edit - Create - Search Summary | Cage | Matings (1) | Animals In Cage (1) | Lab Events (1) | Cage History (3) No. | Animal Name | Status | Sex | DOB | Cage | Cage Purpose | Cage Type 1. | female 7 | Live | F | 2013-10-12 | 70000 | Breeding | Nursing Summary | Cage | Matings (1) | Animals In Cage (1) | Lab Events (1) | Cage History (3) No. | Mating | Parents | Status | Cage | Mating Date | Plu 1. | trio mating | male 13, female 7, female 8 | Active | 10000 | 2013-10-14 | 201

2. Add Litter to *female 7*

Go to the mating and select Add Litter (see above Add Litter and Pups)



In Pups table, note that there is a column "Dam #1".

<u>This is because there are two dams in this mating and you will have to select the mother of this litter.</u>

Select*female 7* as dam

Note that in Cage column, the original breeding cage (10000) is selected.

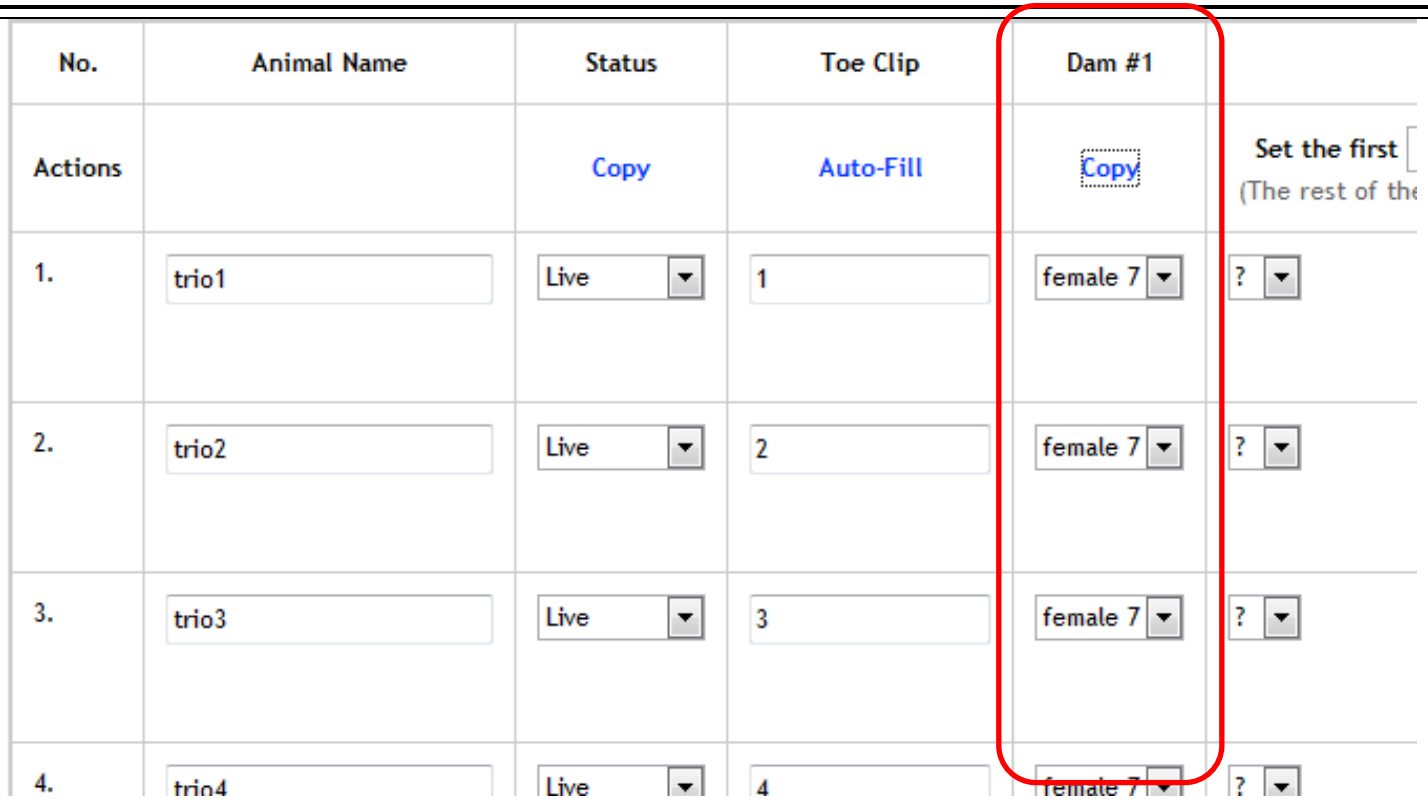
Pups

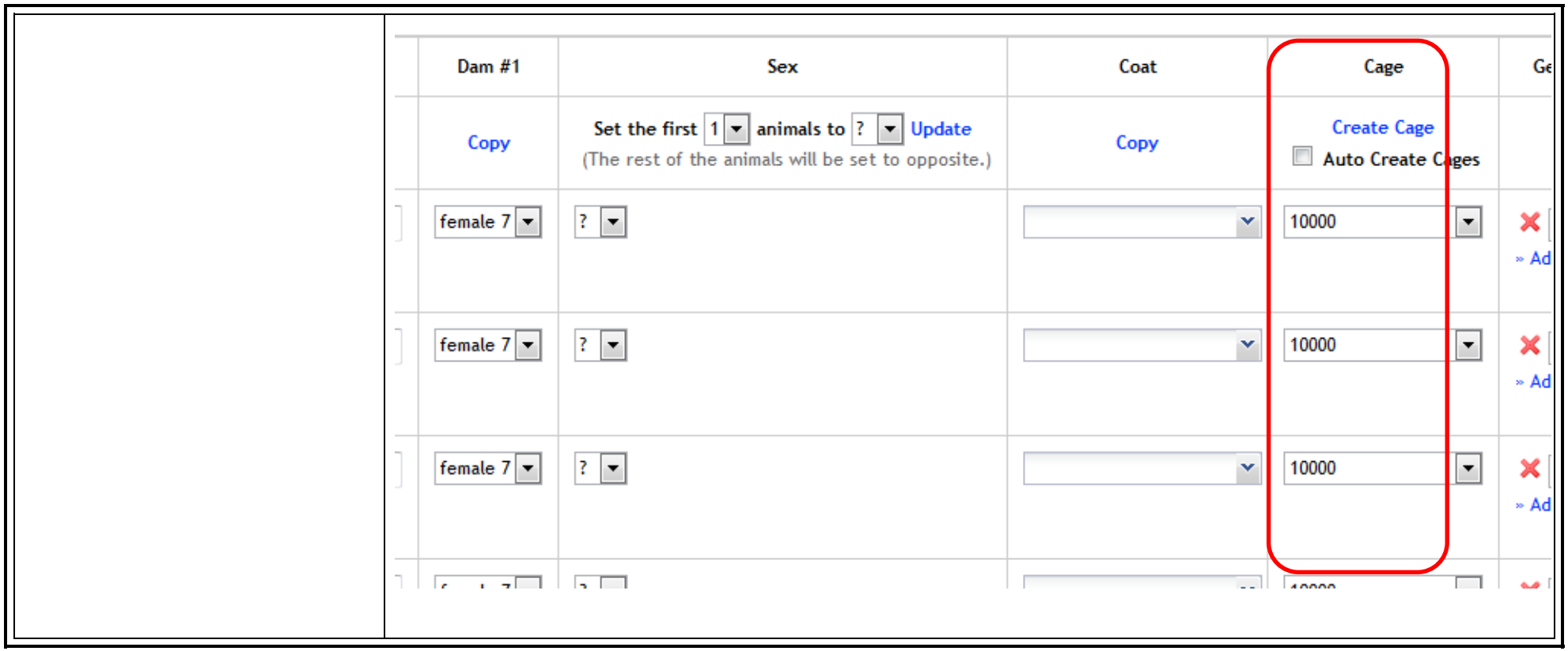
Animal Name Initial: trio

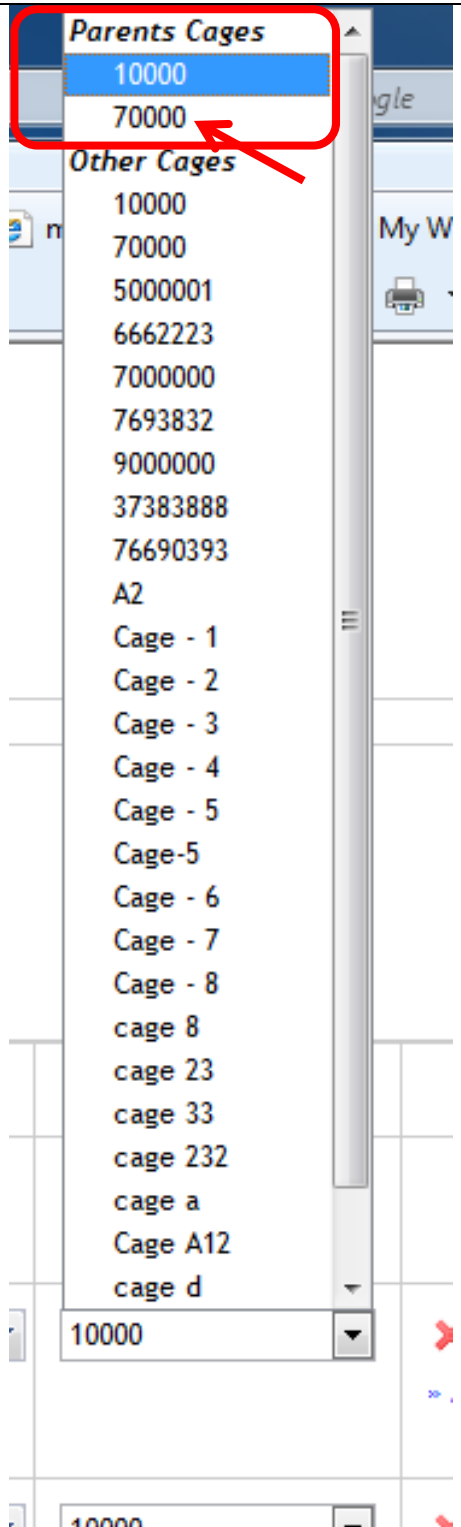
Toe Clip: 1

No. of New Born: 5 Select 0 if you want to create a litter record without pups. You can add more pups when editing this

No.	Animal Name	Status	Toe Clip	Dam #1	Sex
Actions		Copy	Auto-Fill	Copy	Set the first 1 animal (The rest of the animals wil
1.	trio1	Live	1		?
2.	trio2	Live	2		?
3.	trio3	Live	3		?

Change this to the correct cage where *female 7* and litter reside	


Dam #1
Sex
Coat
Cage
Copy
Set the first 1 animals to ? Update
(The rest of the animals will be set to opposite.)
Copy
Create Cage
Auto Create Cages
female 7
?
10000
» Ad

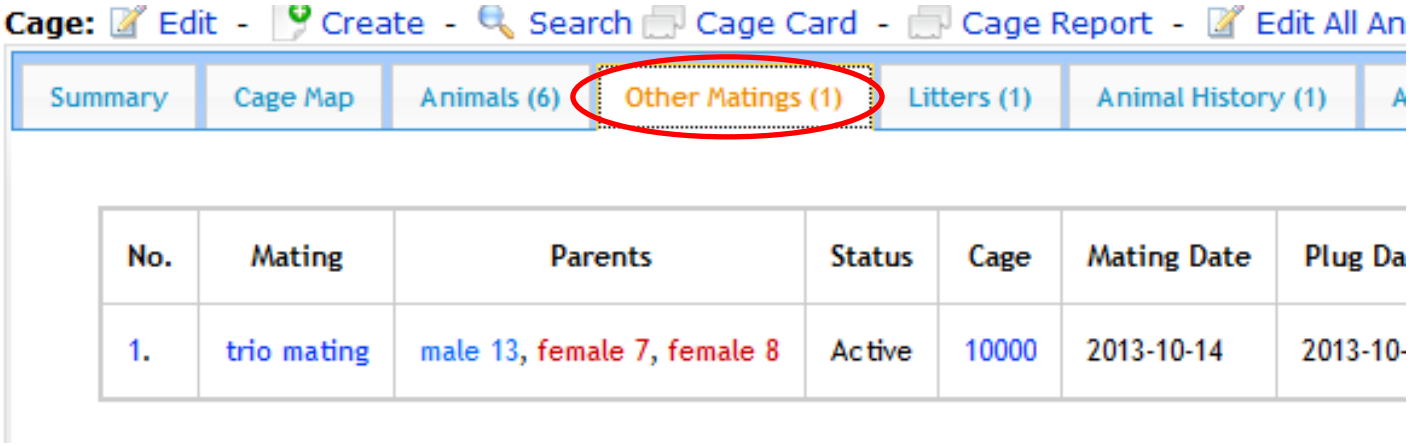

Parents Cages
10000
70000
Other Cages
10000
70000
5000001
6662223
7000000
7693832
9000000
37383888
76690393
A2
Cage - 1
Cage - 2
Cage - 3
Cage - 4
Cage - 5
Cage-5
Cage - 6
Cage - 7
Cage - 8
cage 8
cage 23
cage 33
cage 232
cage a
Cage A12
cage d
10000
My W

192

3. Click Save

In Litter information, confirm that the pups are assigned to the correct breeding cage with the mother

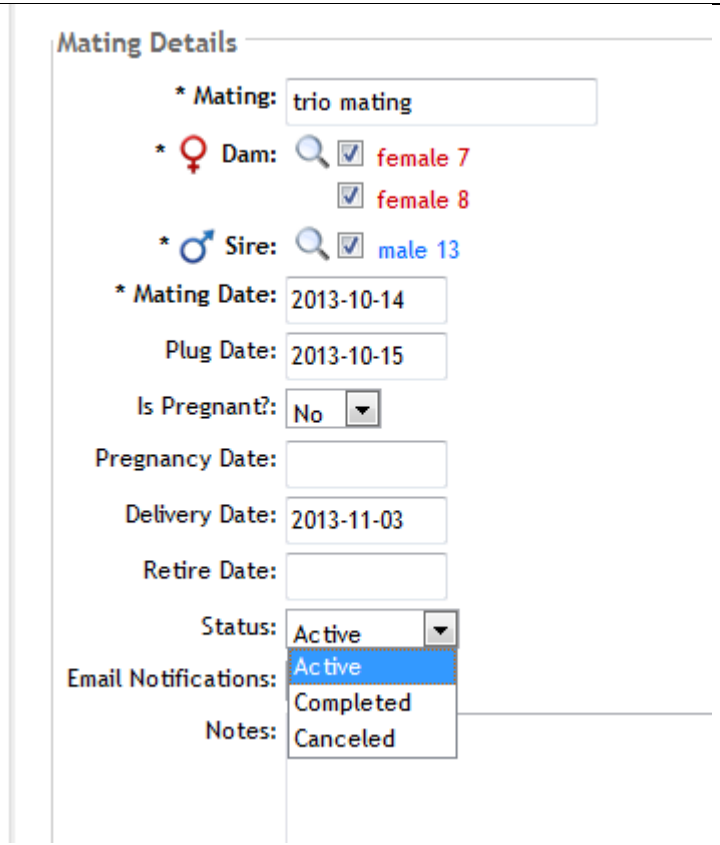
Note that when you open cage information for cage 70000 (where female 7 and her pups reside), there is a tab called **Other Matings**:

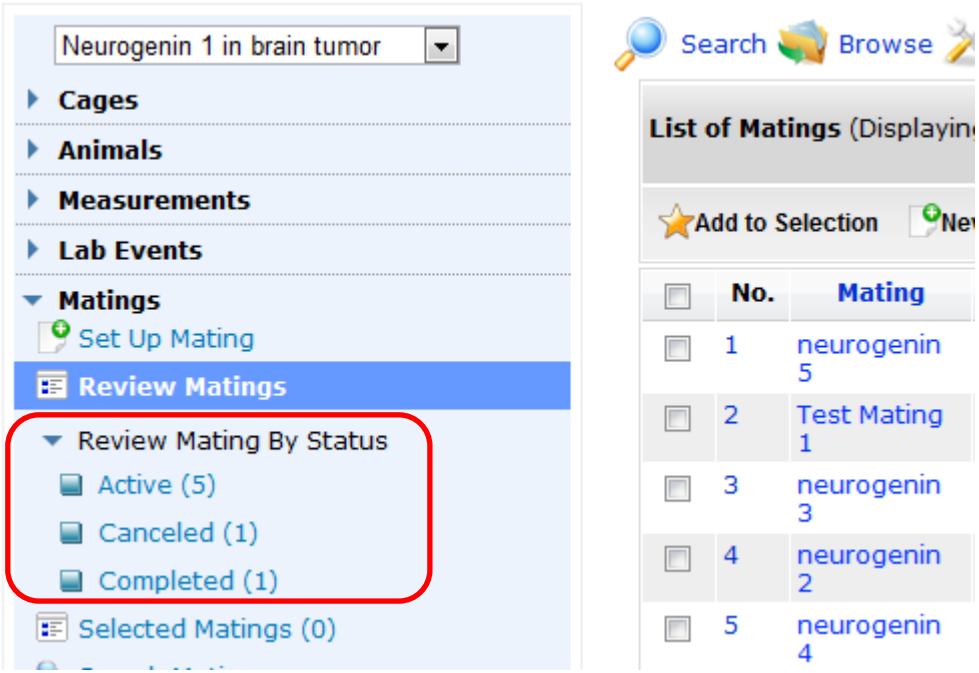


This tab indicates that animals in this cage are part of a mating, although it is not the original breeding cage (10000).

Complete Or Cancel Mating

When you are done with a mating, change the status to Completed or Canceled. **Do not Delete a mating** (unless it is an erroneous record).

When you want to discontinue a mating, change the Status to Completed or Canceled	

In Matings> Review Matings By Status, you can review Active, Canceled and Completed Matings separately	

Mating & Litter Email Notifications

mLIMS will send email reminders for Mating and Litter-related events:

Mating emails:

- Mating reminder
- Delivery reminder
- Retire reminder

Litter emails:

DOB reminder

Tagging reminder

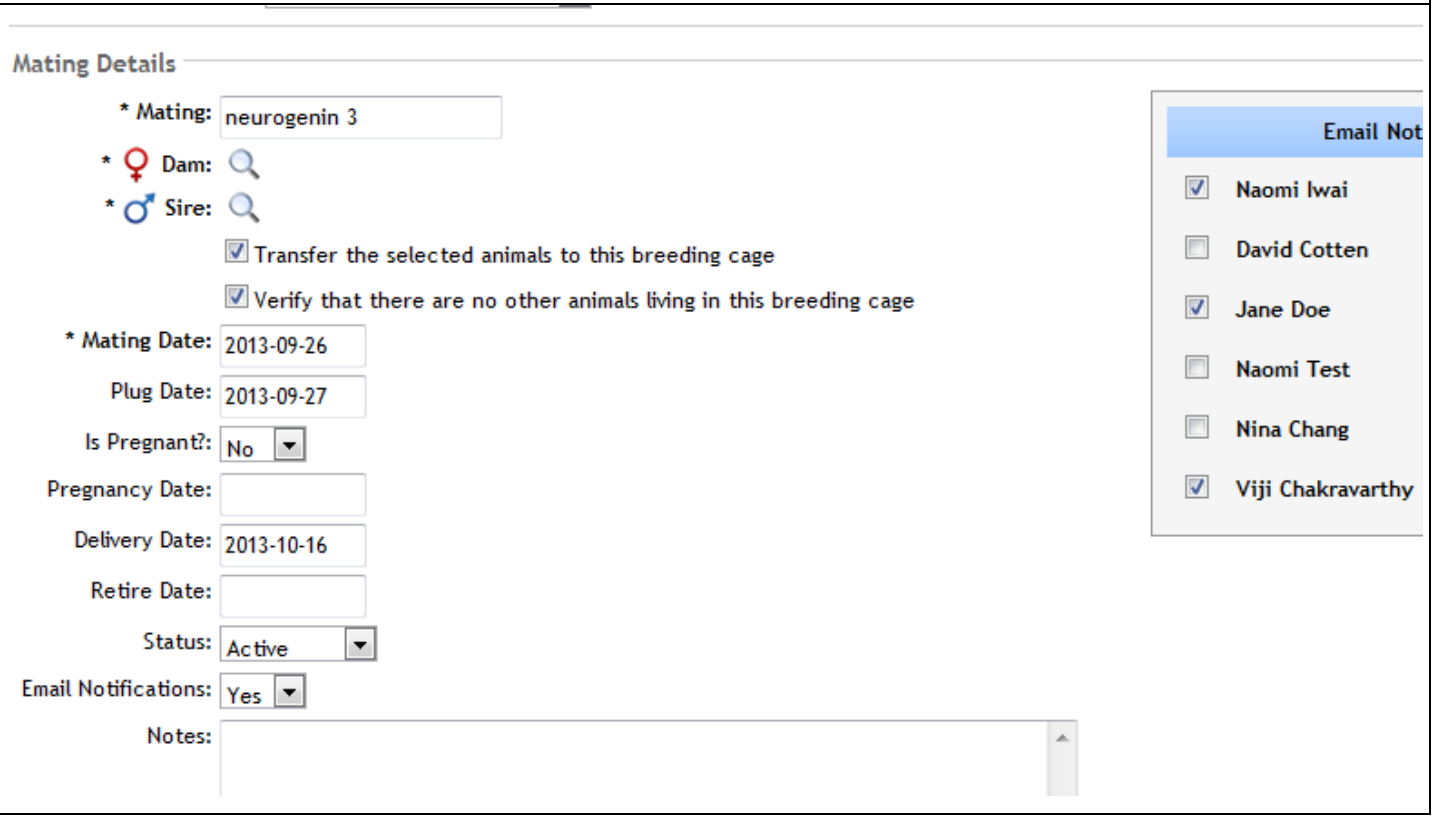
Genotyping reminder

Weaning reminder

The emails will be sent on the day of the scheduled event at 12:00am.

Mating, Delivery, Retire Reminders

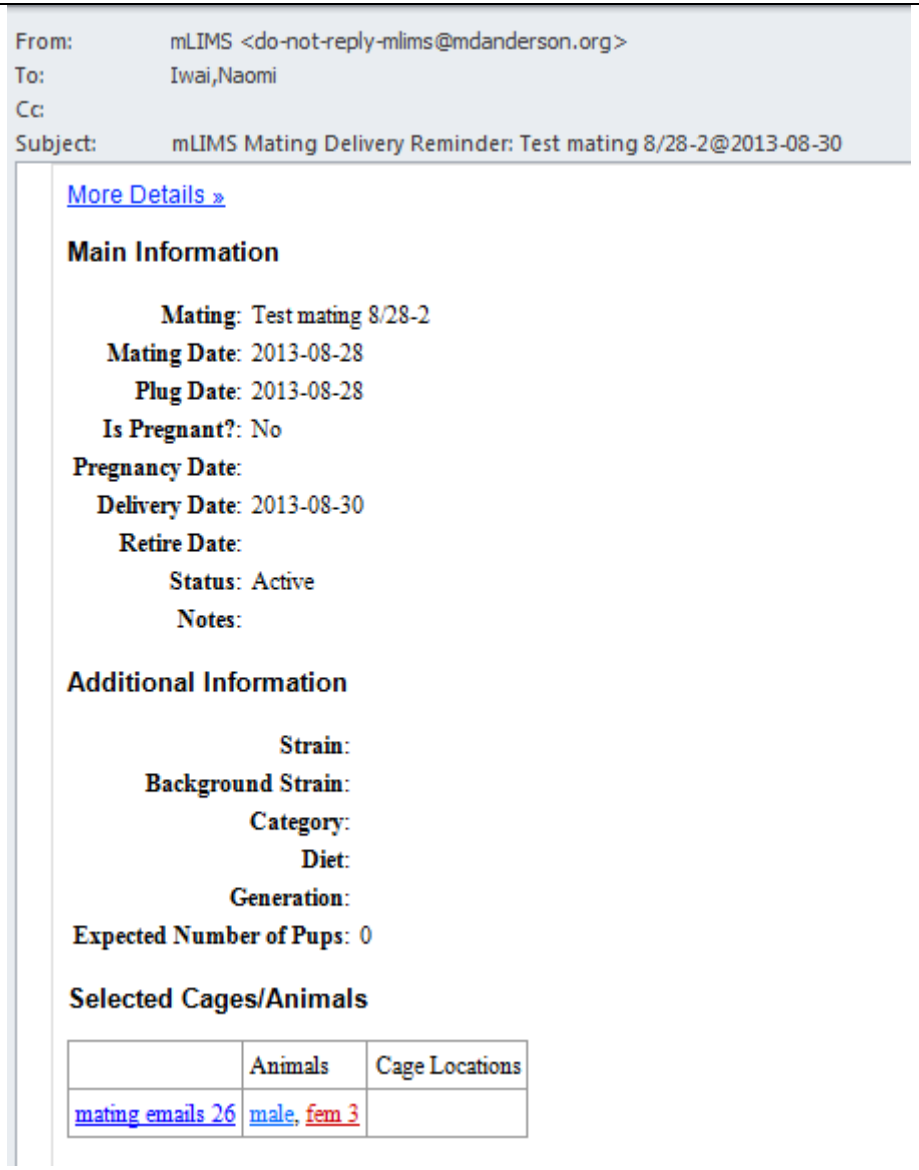
When you create a mating, you can set up Mating Date, Delivery Date and Retire Date, and you can select the email recipients.



On the day of the scheduled mating, delivery, or retirement, at 12am, selected recipients will receive an email to their MDA email address.

The email subject line will indicate the type of reminder (Mating, Mating Delivery, or Mating Retire) and the Mating Name and date of scheduled event.

The email content will display all information related to this mating, including links that direct you to the mating or animal in mLIMS.



From: mLIMS <do-not-reply-mlims@mdanderson.org>
To: Iwai,Naomi
Cc:
Subject: mLIMS Mating Delivery Reminder: Test mating 8/28-2@2013-08-30

More Details »

Main Information

Mating: Test mating 8/28-2
Mating Date: 2013-08-28
Plug Date: 2013-08-28
Is Pregnant?: No
Pregnancy Date:
Delivery Date: 2013-08-30
Retire Date:
Status: Active
Notes:

Additional Information

Strain:
Background Strain:
Category:
Diet:
Generation:
Expected Number of Pups: 0

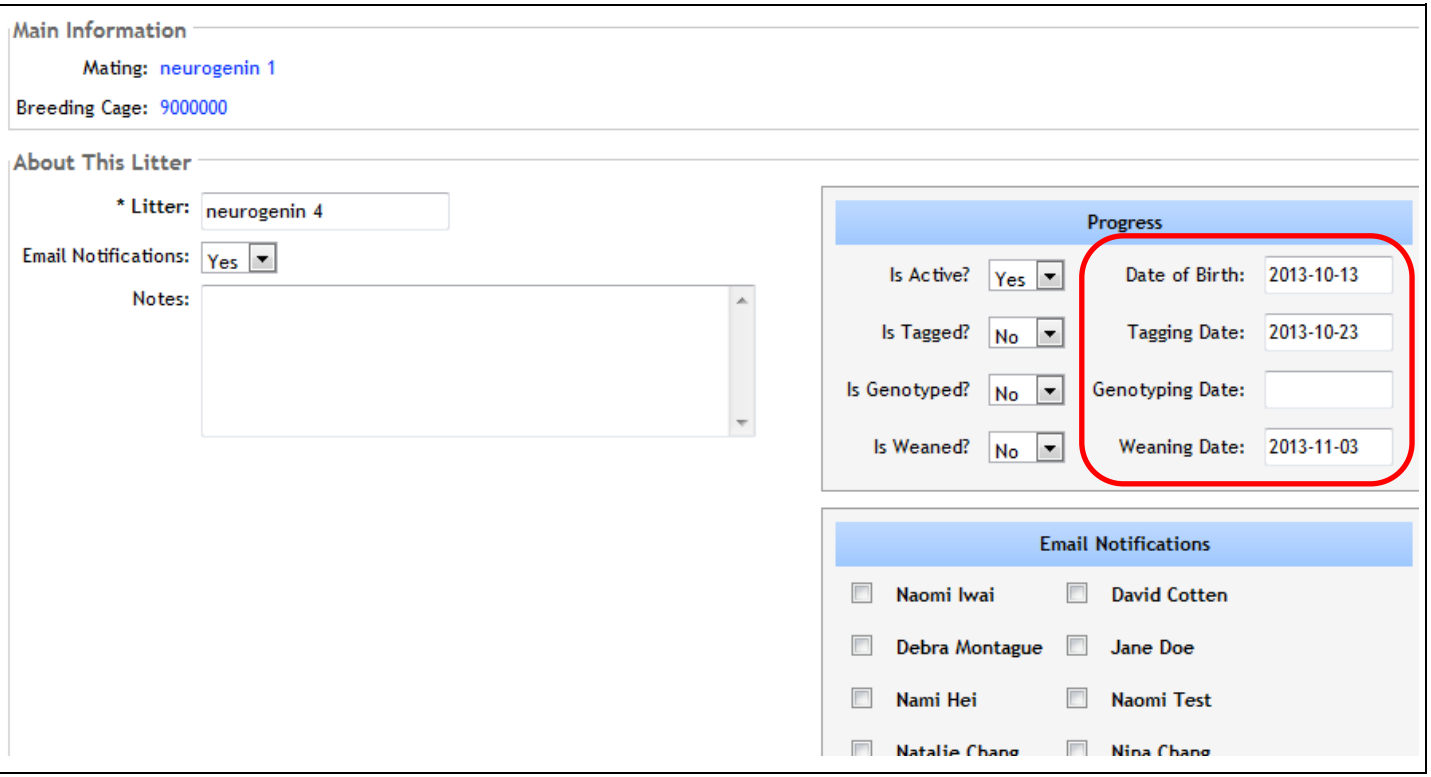
Selected Cages/Animals

	Animals	Cage Locations
mating emails 26	male, fem 3	

Litter DOB, Tagging, Genotyping, Weaning Reminders

When you create a litter, you can set up Date of Birth, Tagging Date, Genotyping Date and Weaning Date, and you can select the email recipients

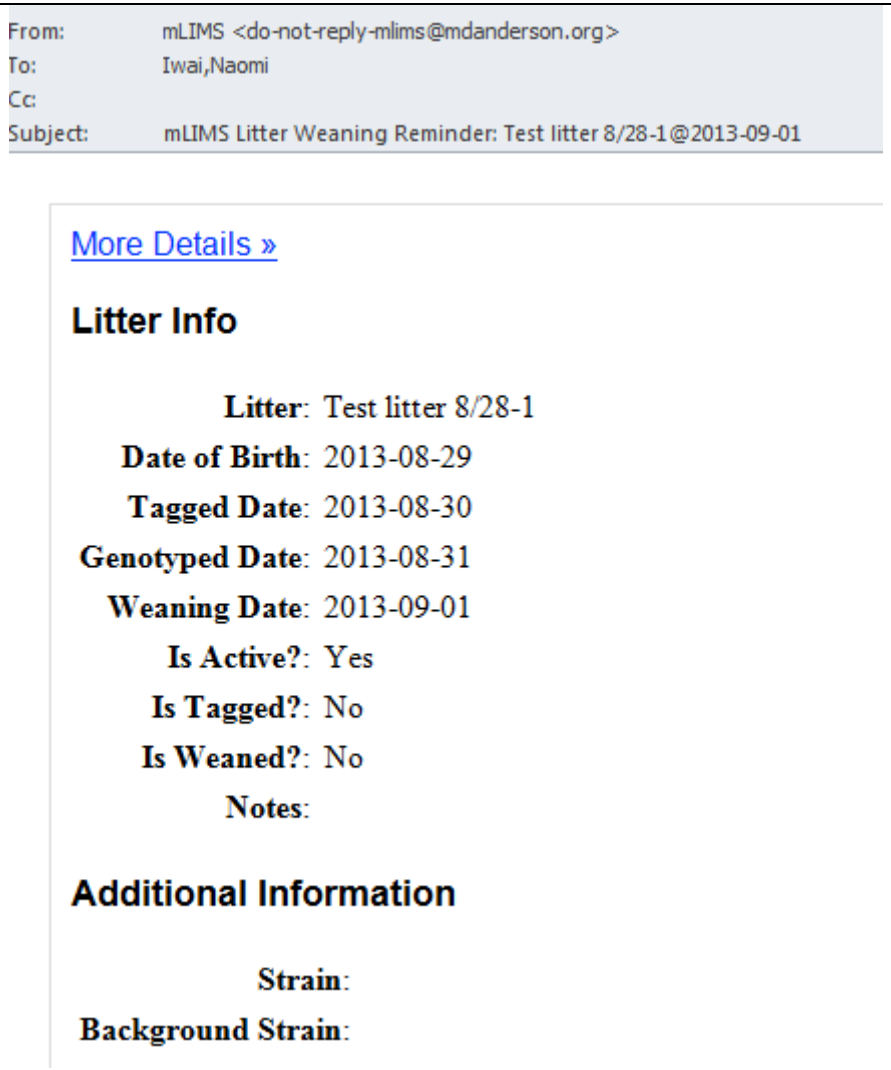
If DOB is today or a past date, no email reminder is generated (see below Mating and Litter email generation rules)



On the day of the scheduled DOB, Tagging, Genotyping, or Weaning, at 12am, selected recipients will receive an email to their MDA email address.

The email subject line will indicate the type of reminder (DOB, Tagging, Genotyping, or Weaning) and the Litter Name and date of scheduled event.

The email content will display all information related to this litter, including links that direct you to the litter in mLIMS.



From: mLIMS <do-not-reply-mlims@mdanderson.org>
To: Iwai,Naomi
Cc:
Subject: mLIMS Litter Weaning Reminder: Test litter 8/28-1@2013-09-01

More Details »

Litter Info

Litter: Test litter 8/28-1
Date of Birth: 2013-08-29
Tagged Date: 2013-08-30
Genotyped Date: 2013-08-31
Weaning Date: 2013-09-01
Is Active?: Yes
Is Tagged?: No
Is Weaned?: No
Notes:

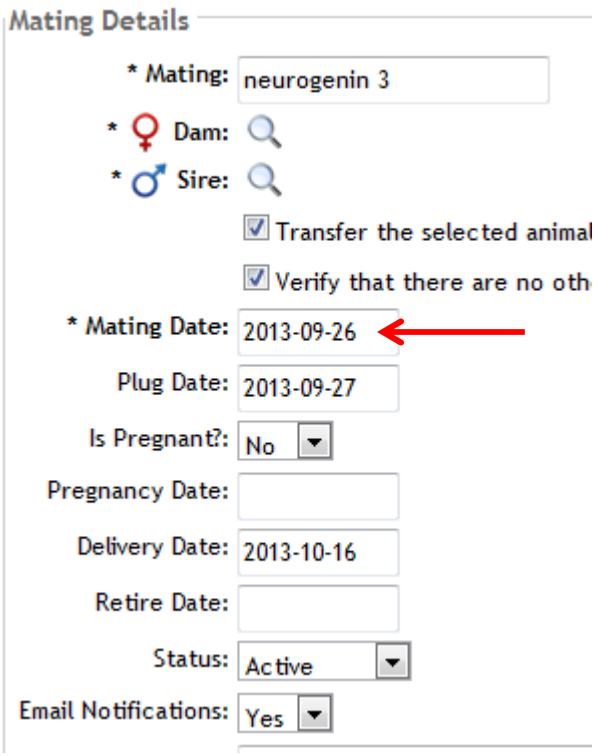
Additional Information

Strain:
Background Strain:

Mating and Litter email generation rules

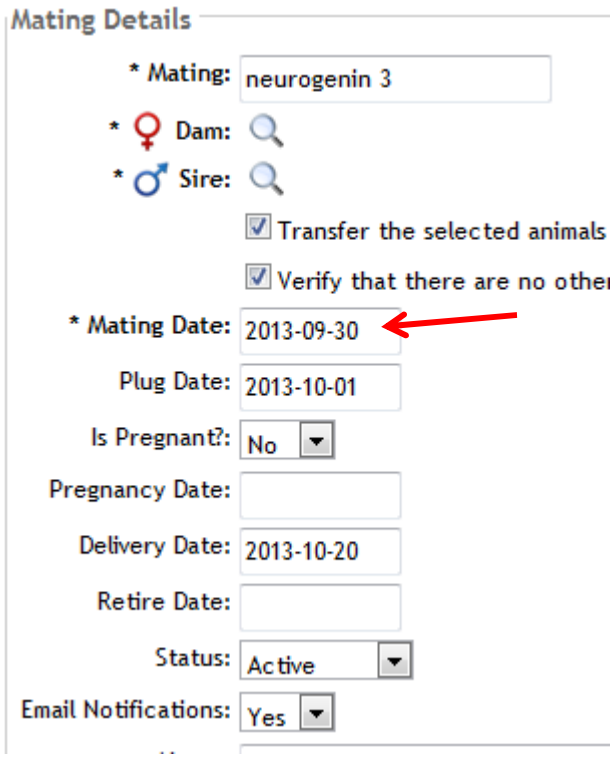
- **Emails are sent on future dates only (i.e. tomorrow or later). They are not sent on today.**

Example: It is 9/26 today and I set up a mating:



The Mating Date is today. I will not receive a Mating reminder.

Example: It is 9/26 today and I set up a mating with Mating Date 9/30 (perhaps as reminder for myself or others to set up this mating in the future):

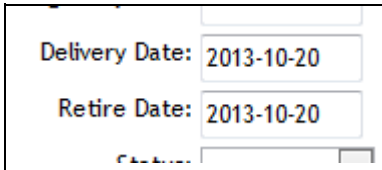


I will receive a Mating reminder on 9/30.

- **You can edit the mating or litter at any time and change dates and email recipients. The system will update the information and generate emails accordingly.**

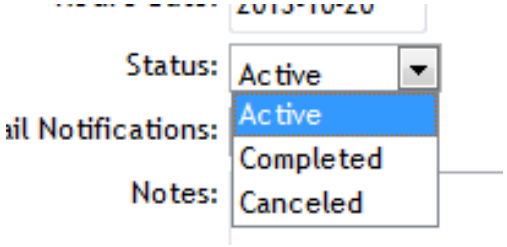
- **Only one email will be sent on the same day for a given mating or litter, i.e. no duplicate emails on the same day.**

Example: Delivery Date and Retire Date are set on the same day:



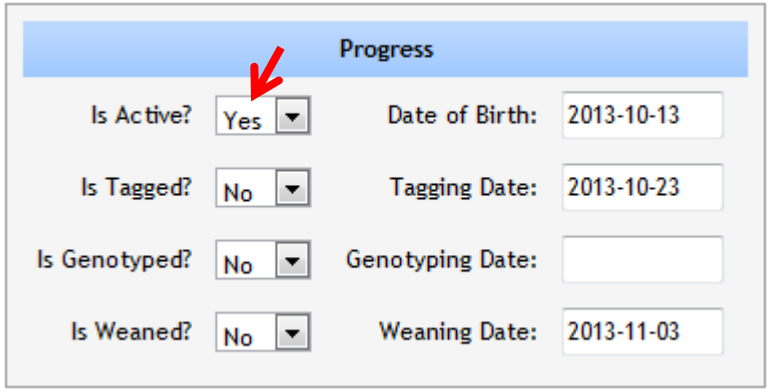
Only one email will be sent on 10/20

- **The Status of the Mating has to be Active**



If you change the Mating Status to Completed or Canceled, no emails will be generated

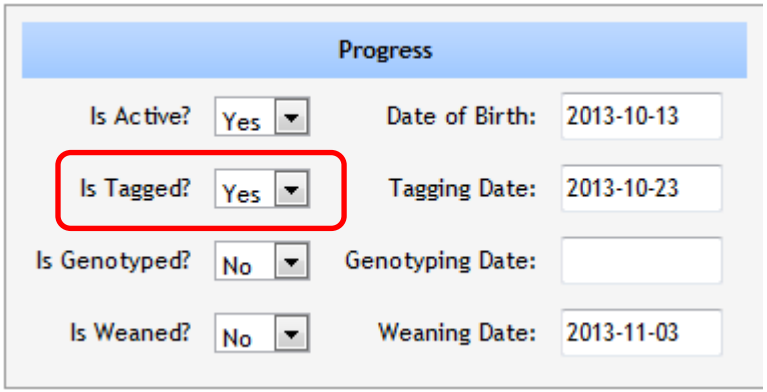
- **The Status of the Litter has to be Active**



If you change the Litter Status to 'Is Active? No', no emails will be generated

- **If a litter event has already been performed, no email will be generated for that event**

  For example, if the answer to Is Tagged? is set to Yes, no Tagging reminder will be generated (even if the Tagging Date is a future date)



Section 8 Lab Events

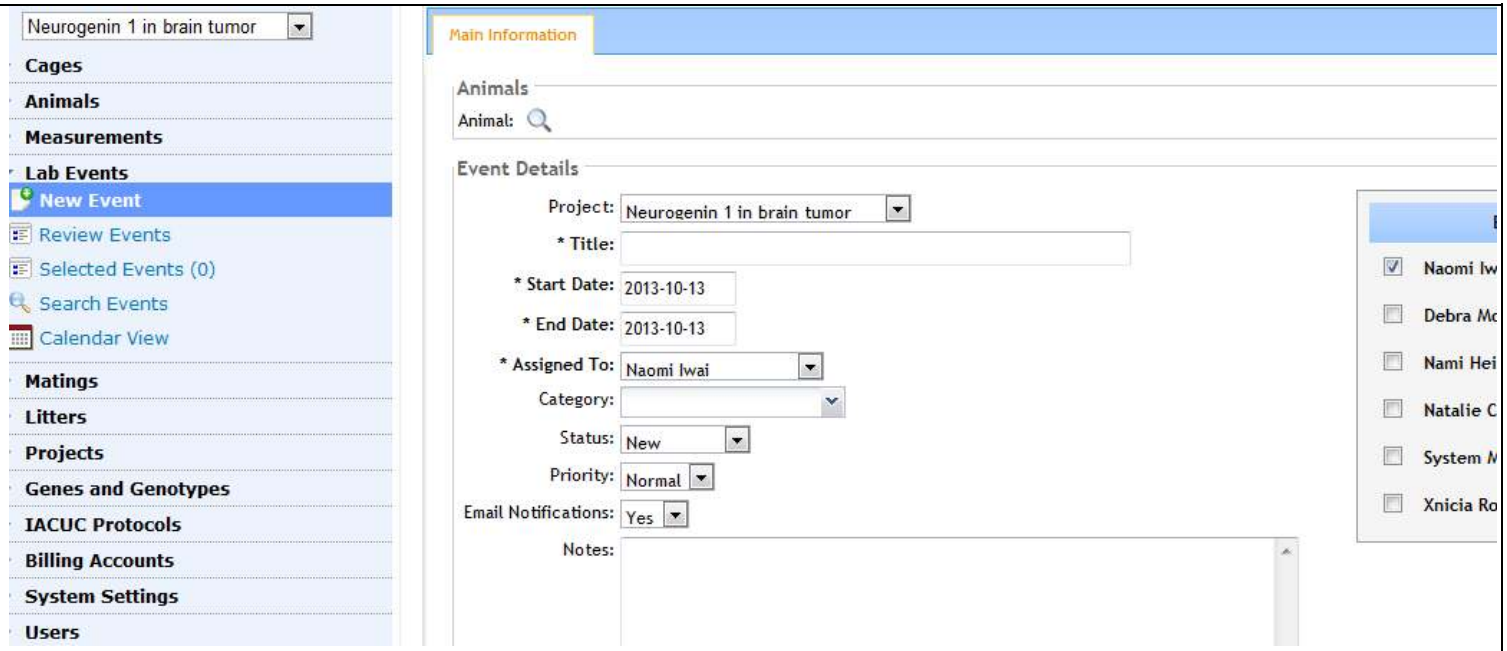
Create New Event

You can set up Events for yourself and also to share information with your lab members. You can schedule the event date, assign an event to someone else, set up email reminders and share the status of the event with others.

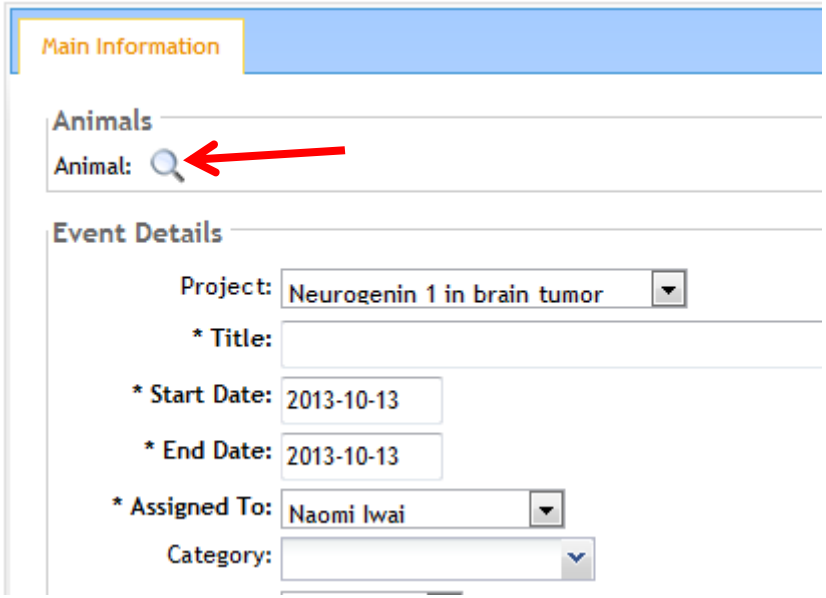
There are several possible ways to create an event

Method 1

In left hand menu, select Lab Events > New Event



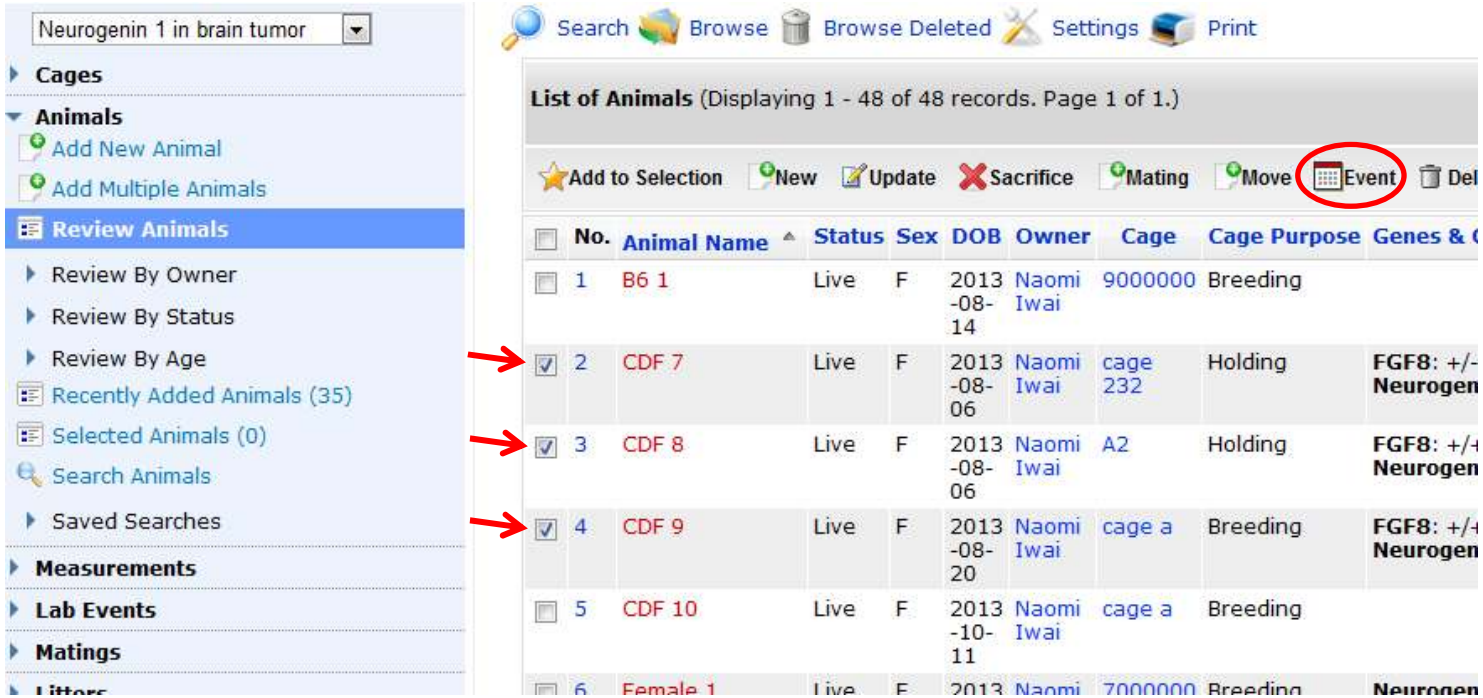
Select animals for the event from the magnifying glass icon list.



Note: you do not have to select animals for an event (you can create "animal-less" events)

Method 2

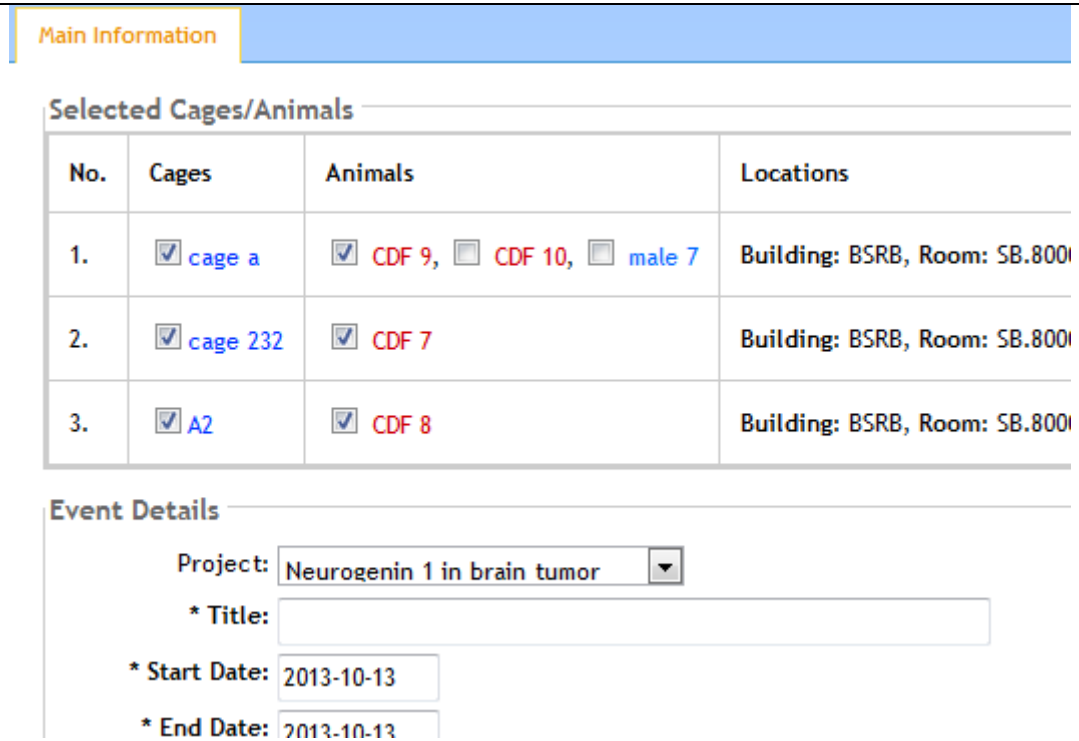
In Review Animals List, select the animals for the event and click on Event



In New Event window, the selected animals and cages display. Note that all animals in the cages are displayed, even the animals that you did not select.

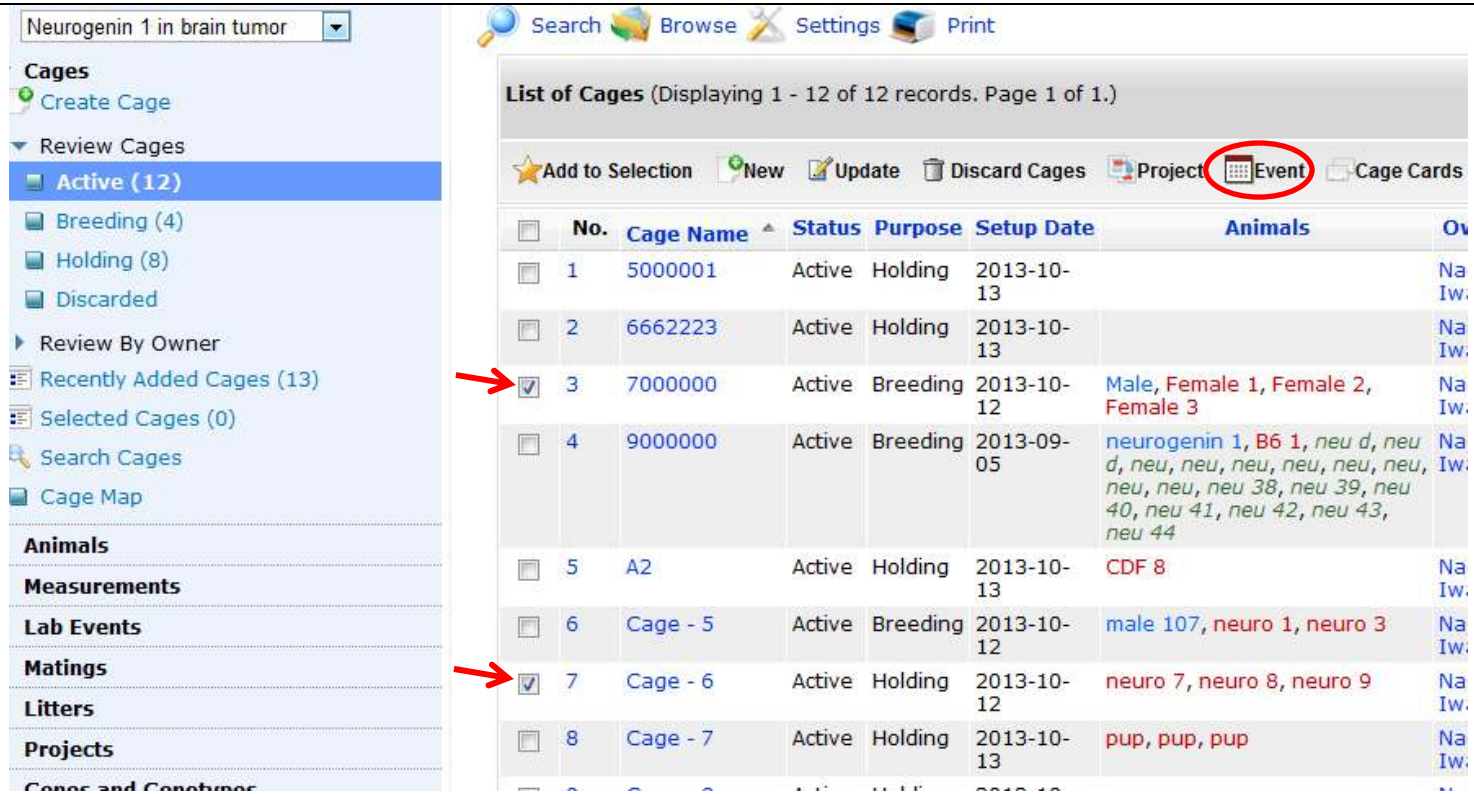
Select the animals for this event by

checking/unchecking the check boxes.



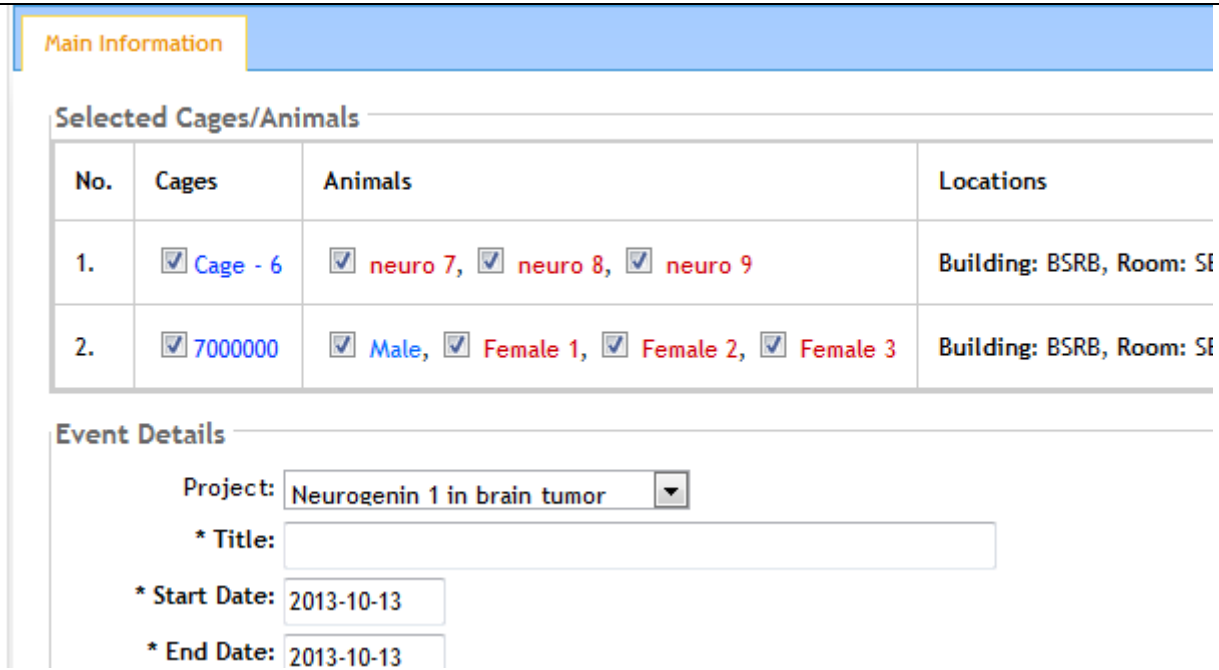
Method 3

In Review Cages List, select the cages for the event and click on Event



In New Event window, the selected cages and animals display.

Select the animals for this event by checking/unchecking the check boxes.



Once you have selected the animals/cages for the event:

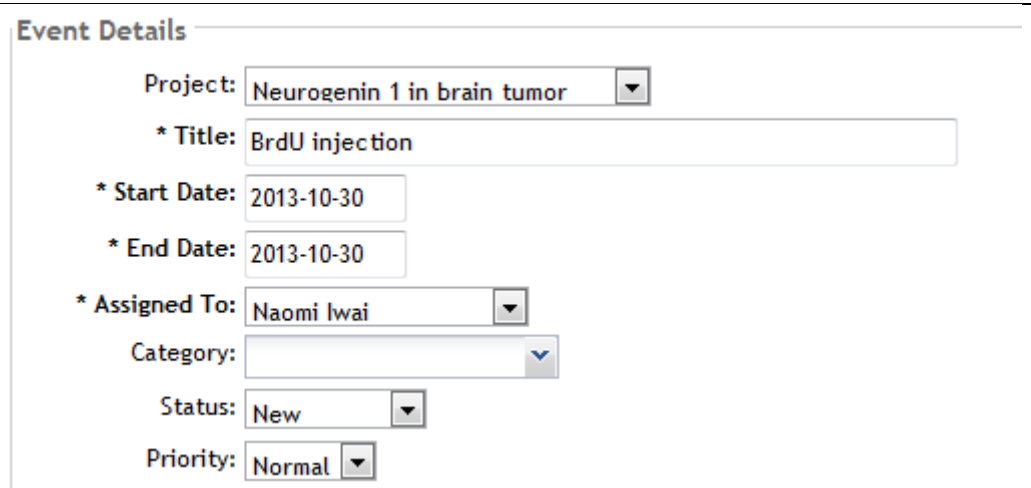
1. **Enter a Title for the event**
2. **Enter Start Date and End Date for the event**

If this is a one-time event, select the same date for Start and End Date.

If this is an event that spans multiple days, enter different days for Start and End Date.

3. **Enter 'Assigned To' user**

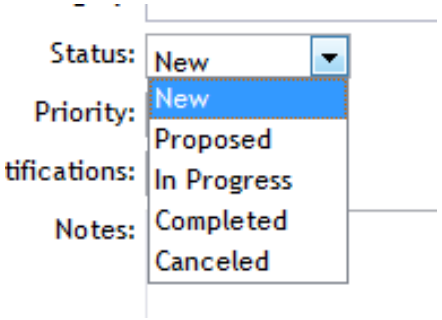
You can assign this event to a



lab member. By default, it is assigned to yourself.

4. Enter Status

Choose New or Proposed (you can choose Proposed for an event that you want to assign to someone else)



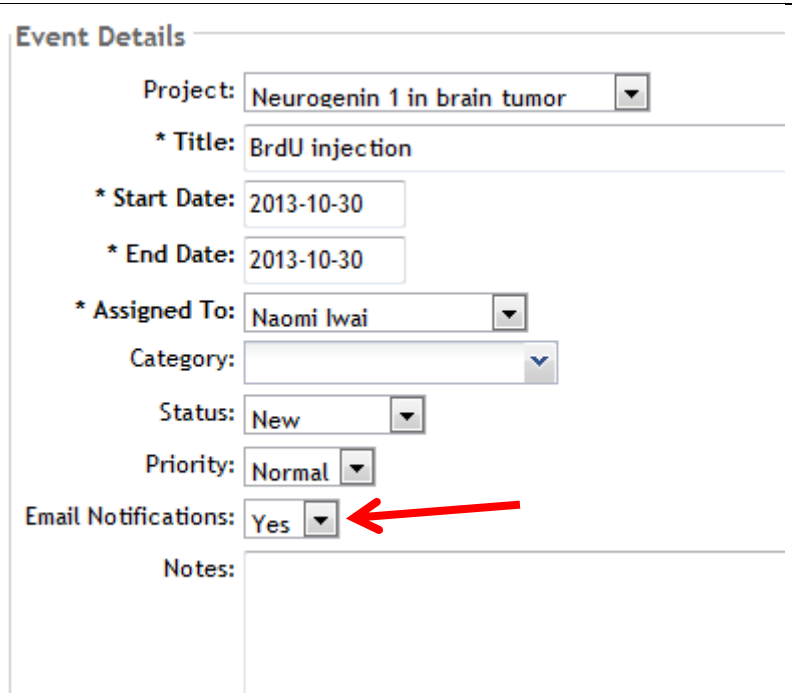
5. Set up Email Notifications

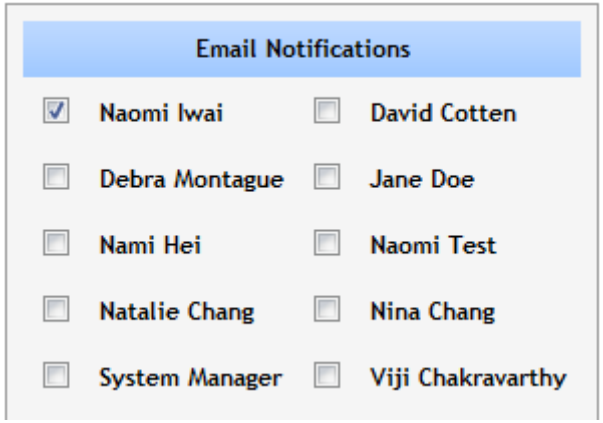
mLIMS will send you email notifications for**Event Creation, Event Updates, and Event Reminders.**

For more information, see below Event Email Notifications.

(if you don't want emails for this Event, select Email Notifications: No)

In the Email Notifications box, select the email recipients. You can choose any of your lab members.



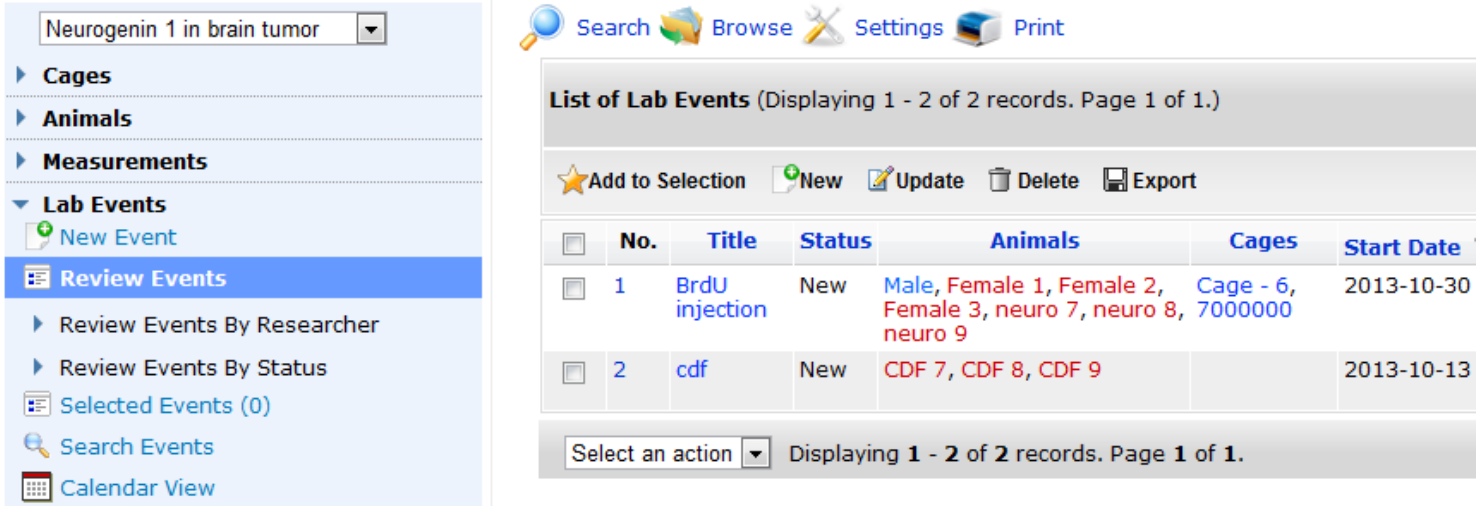
6. Click on Save	

Review Events

There are several possible ways to review your events:

Method 1)

In Lab Events > Review Events, review your events


Neurogenin 1 in brain tumor
Cages
Animals
Measurements
Lab Events
New Event
Review Events
Review Events By Researcher
Review Events By Status
Selected Events (0)
Search Events
Calendar View
Search
Browse
Settings
Print
List of Lab Events (Displaying 1 - 2 of 2 records. Page 1 of 1.)
Add to Selection
New
Update
Delete
Export
No. Title Status Animals Cages Start Date
1 BrdU injection New Male, Female 1, Female 2, Female 3, neuro 7, neuro 8, neuro 9 Cage - 6, 7000000 2013-10-30
2 cdf New CDF 7, CDF 8, CDF 9 2013-10-13
Select an action
Displaying 1 - 2 of 2 records. Page 1 of 1.

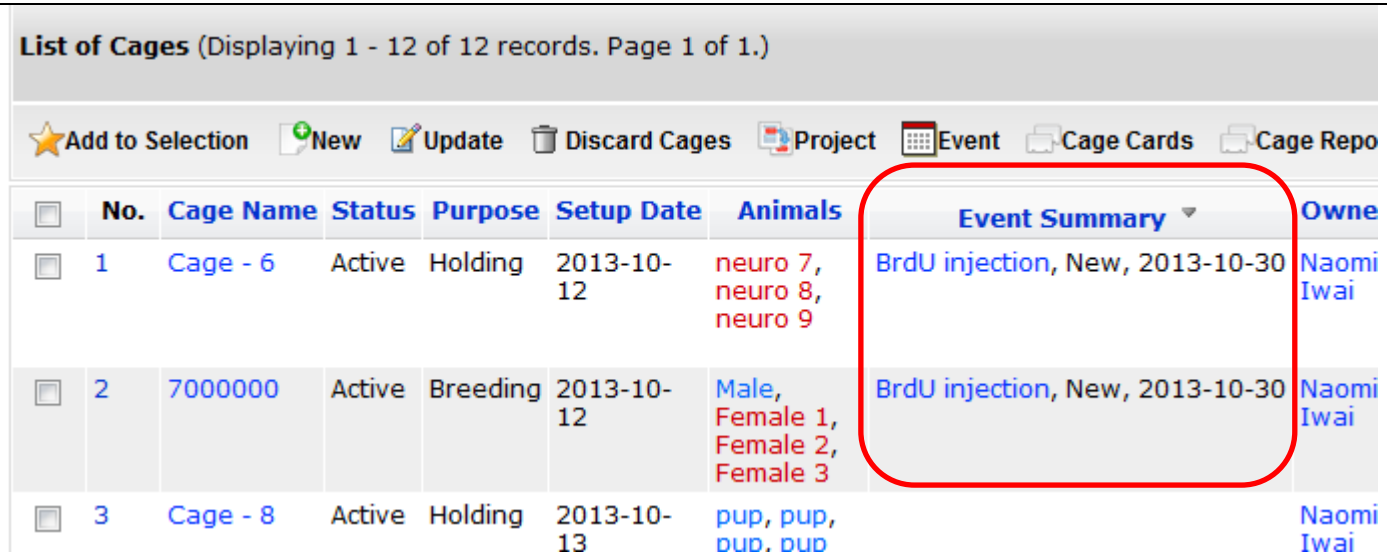
Method 2)

In Review Animals List, under Event Summary, the Event Title, Event Status and Event Start Date/End Date are displayed for each animal.

List of Animals (Displaying 1 - 4 of 4 records. Page 1 of 1.)
New
Update
Sacrifice
Mating
Move
Event
Delete
Export
Remove from Selection
No. Animal Name Status Sex DOB Cage Cage Purpose Event Summary Genes & Genotyp
1 Female 1 Live F 2013-08-20 7000000 Breeding BrdU injection, New, 2013-10-30 Neurogenin 1: he
2 Female 2 Live F 2013-08-21 7000000 Breeding BrdU injection, New, 2013-10-30 Neurogenin 1: w
3 Female 3 Live F 2013-09-03 7000000 Breeding BrdU injection, New, 2013-10-30 Neurogenin 1: w
4 Male Live M 2013 7000000 Breeding BrdU injection, New, 2013-10-30

Method 3)

In Review Cages List, under Event Summary, the Event Title, Event Status and Event Start Date/End Date are displayed for each cage.

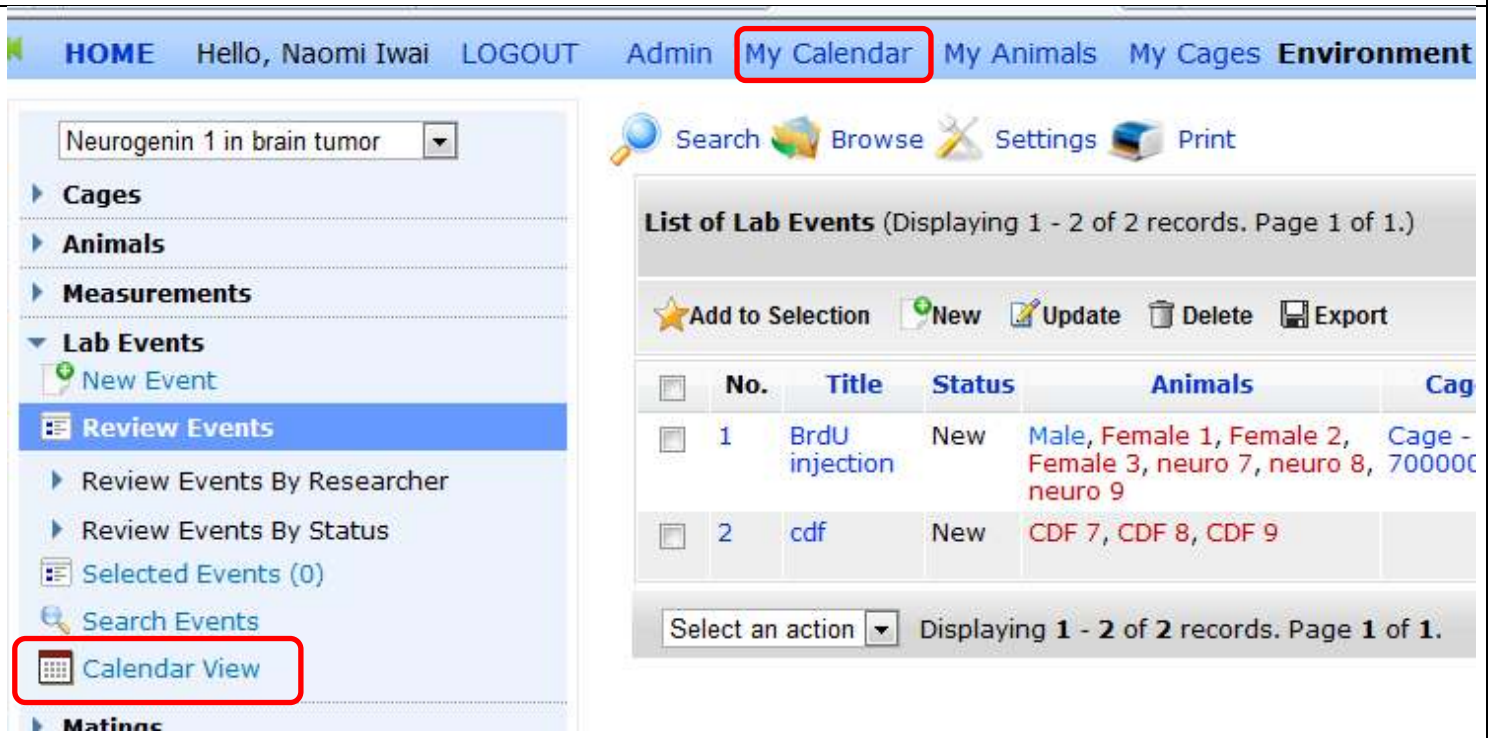


Method 4)

Click on Calendar View under Lab Events

Or:

Click on My Calendar in top menu bar



Your Events will be displayed in a calendar view.

Note:

Only active Events will be displayed, i.e. Status is New, Proposed, or In Progress (Completed and Canceled Events will not display on the calendar)

(Overdue Events display in red)

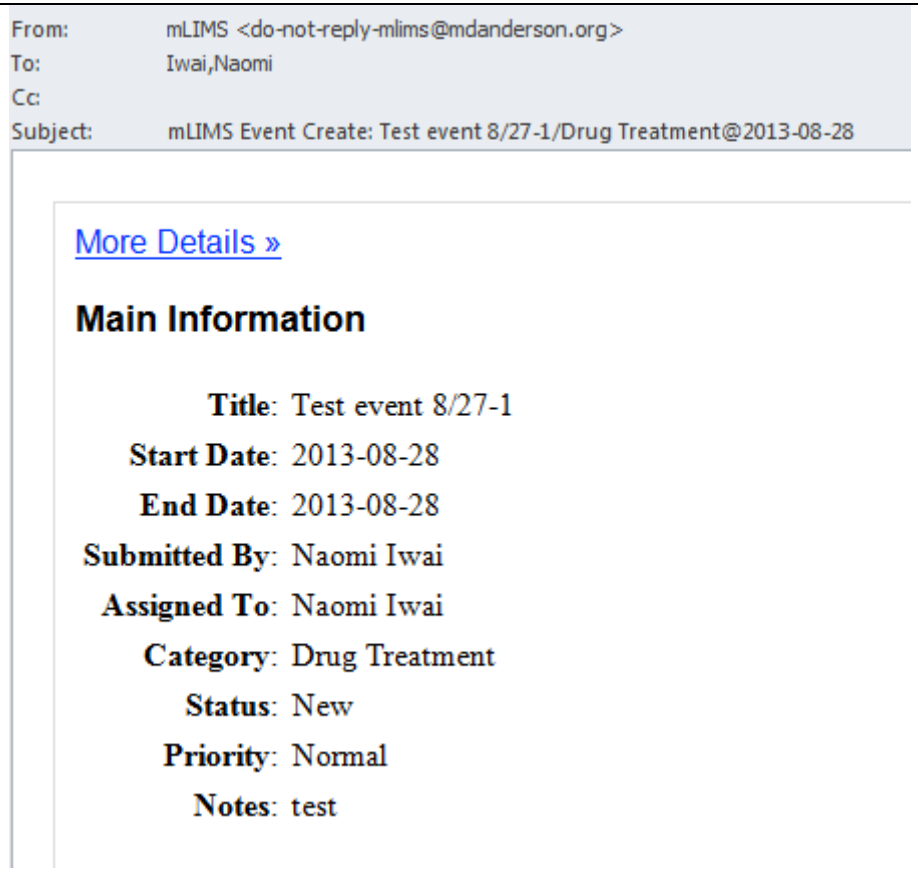
Event Email Notifications

mLIMS will send email reminders on the Event Date, as well as email notifications when an Event is created or updated.

'Event Create' Notification

When you create an event, mLIMS sends an email to the selected recipients <u>immediately</u> to notify them of the event creation.

<u>Exception: when the event Start Date is today or a past date, no email is generated.</u>



Event Reminder

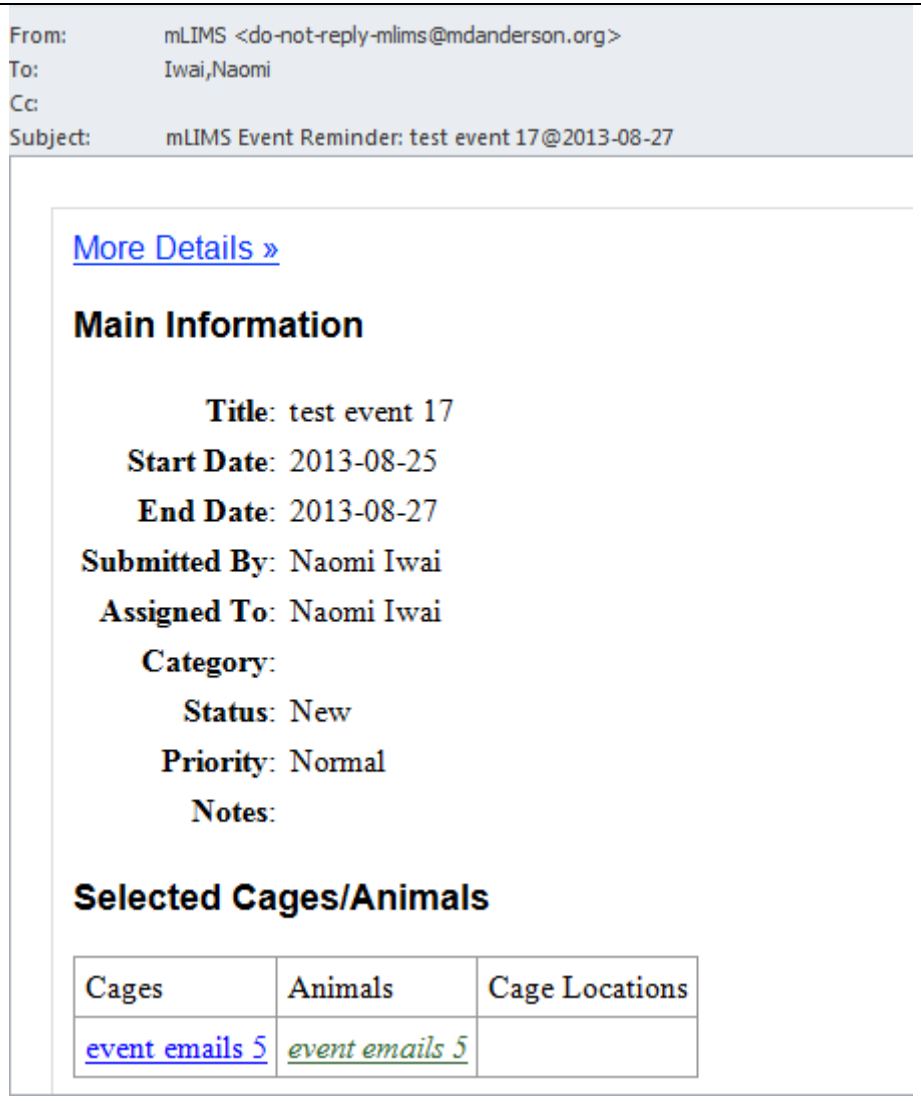
mLIMS sends an Event Reminder email to selected recipients on the Start Date and End Date.

If the Start Date and End Date are the same (one-time event), only one email is generated on this day.

The email is sent at 12:00 am.

Note: when the Start Date is today or a past date at the time of event creation, no email is generated.

Note: if the Status of the Event is Completed or Canceled, no email is generated.



From: mLIMS <do-not-reply-mlims@mdanderson.org>
To: Iwai,Naomi
Cc:
Subject: mLIMS Event Reminder: test event 17@2013-08-27

More Details »

Main Information

Title: test event 17
Start Date: 2013-08-25
End Date: 2013-08-27
Submitted By: Naomi Iwai
Assigned To: Naomi Iwai
Category:
Status: New
Priority: Normal
Notes:

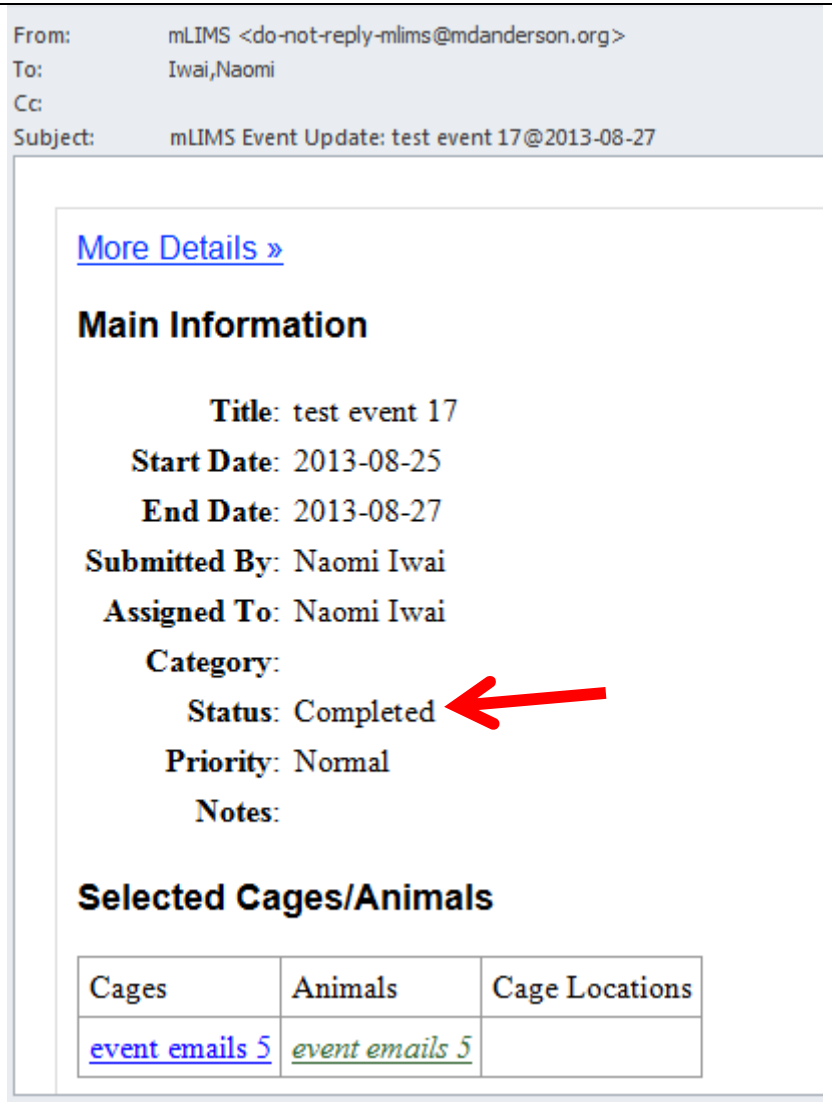
Selected Cages/Animals

Cages	Animals	Cage Locations
event emails 5	*event emails 5*	

'Event Update' Notification

When you make an update to an event, mLIMS sends an email to the selected recipients <u>immediately</u> to notify them of the event update.

For example, if you (or someone else to whom the event was assigned) change the event status to Completed, an email will be sent to all selected recipients, notifying them of the update.



From: mLIMS <do-not-reply-mlims@mdanderson.org>
To: Iwai,Naomi
Cc:
Subject: mLIMS Event Update: test event 17@2013-08-27

More Details »

Main Information

Title: test event 17
Start Date: 2013-08-25
End Date: 2013-08-27
Submitted By: Naomi Iwai
Assigned To: Naomi Iwai
Category:
Status: Completed
Priority: Normal
Notes:

Selected Cages/Animals

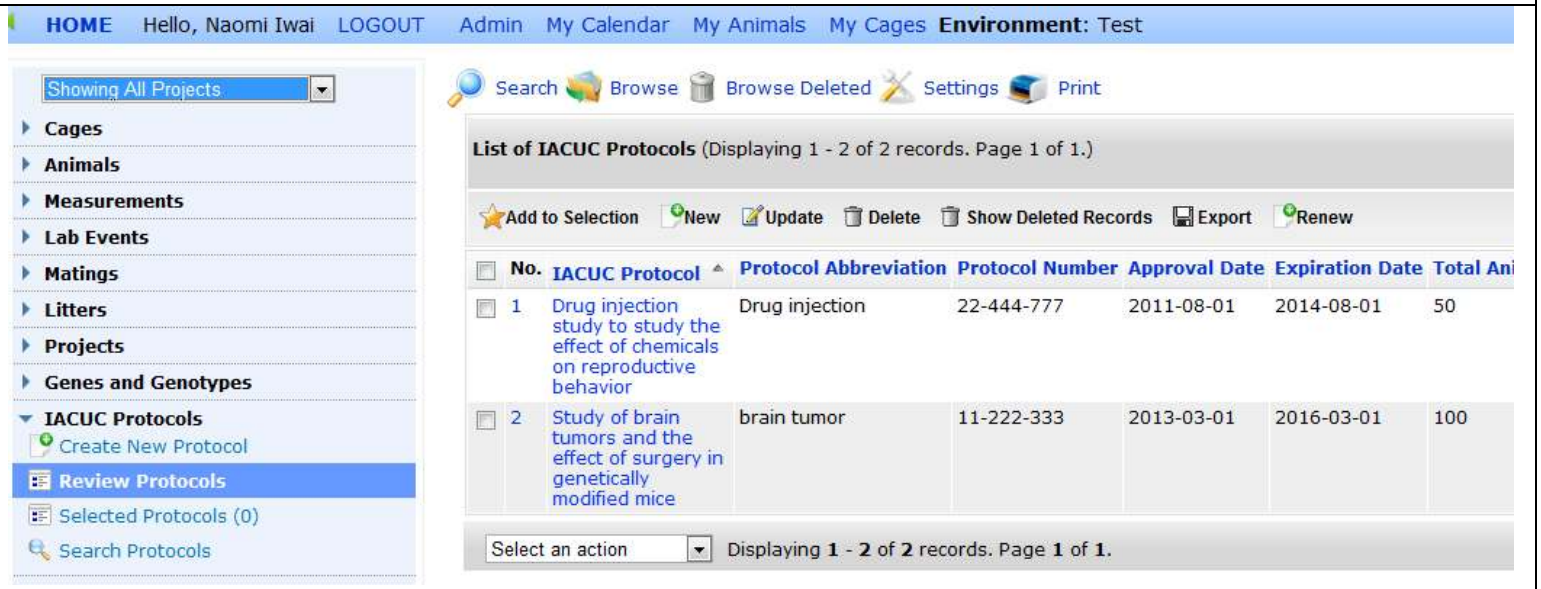
Cages	Animals	Cage Locations
event emails 5	*event emails 5*	

Section 9 IACUC Protocols

Review Protocol Information

For how to create a protocol, refer to Section 2 Setting Up Your mLIMS System: Create IACUC Protocol.

In IACUC Protocols > Review Protocols you can view all information related to your lab's protocols.


HOME Hello, Naomi Iwai LOGOUT Admin My Calendar My Animals My Cages Environment: Test
Showing All Projects
Cages
Animals
Measurements
Lab Events
Matings
Litters
Projects
Genes and Genotypes
IACUC Protocols
Create New Protocol
Review Protocols
Selected Protocols (0)
Search Protocols
Search Browse Browse Deleted Settings Print
List of IACUC Protocols (Displaying 1 - 2 of 2 records. Page 1 of 1.)
Add to Selection New Update Delete Show Deleted Records Export Renew
No. IACUC Protocol Protocol Abbreviation Protocol Number Approval Date Expiration Date Total Ani
1 Drug injection study to study the effect of chemicals on reproductive behavior Drug injection 22-444-777 2011-08-01 2014-08-01 50
2 Study of brain tumors and the effect of surgery in genetically modified mice brain tumor 11-222-333 2013-03-01 2016-03-01 100
Select an action
Displaying 1 - 2 of 2 records. Page 1 of 1.

mLIMS will track the number of animals and cages per protocol.

List of IACUC Protocols (Displaying 1 - 2 of 2 records. Page 1 of 1.)
Add to Selection New Update Delete Show Deleted Records Export Renew
No. IACUC Protocol Protocol Abbreviation Protocol Number Total Animals Quota No. of Total Animals No. of Active Cages
1 Study of brain tumors and the effect of surgery in genetically modified mice brain tumor 11-222-333 100 14 4

Note:

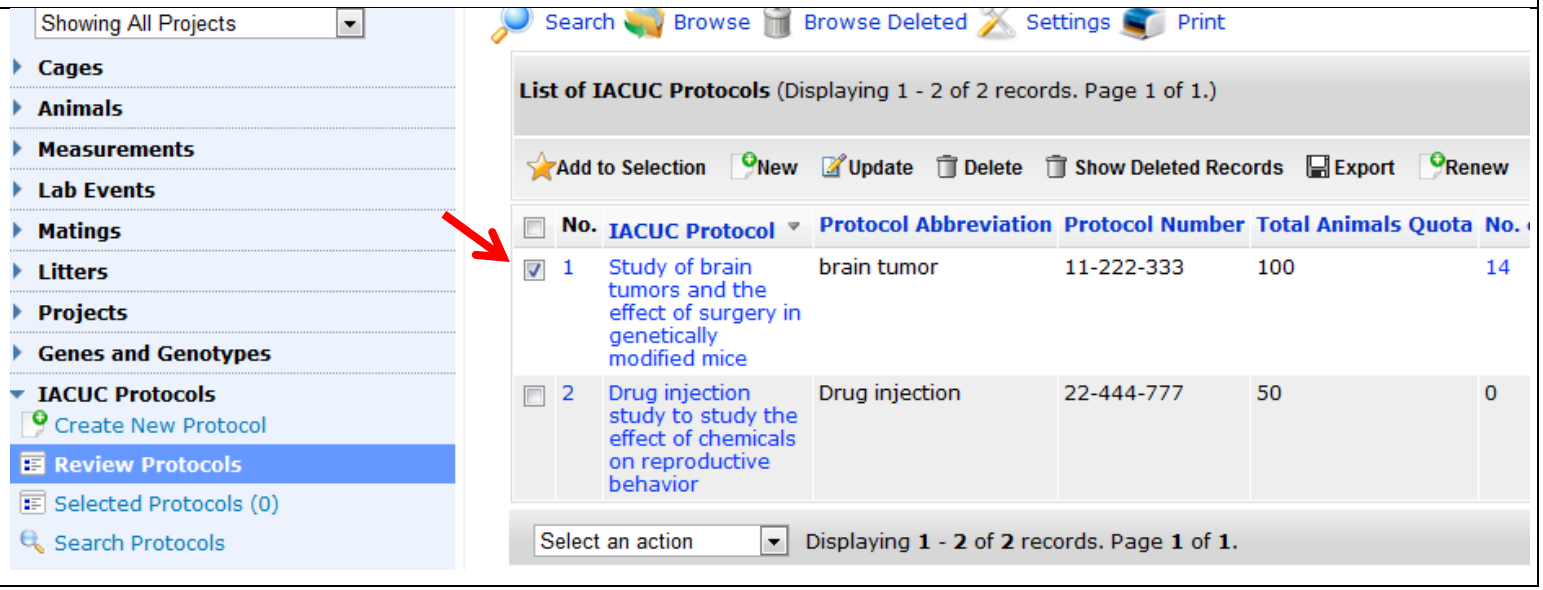
How mLIMS counts the number of animals per protocol is not consistent with IACUC regulations.

mLIMS does not give you a warning when a protocol expires, nor when you have exceeded the total animals quota.

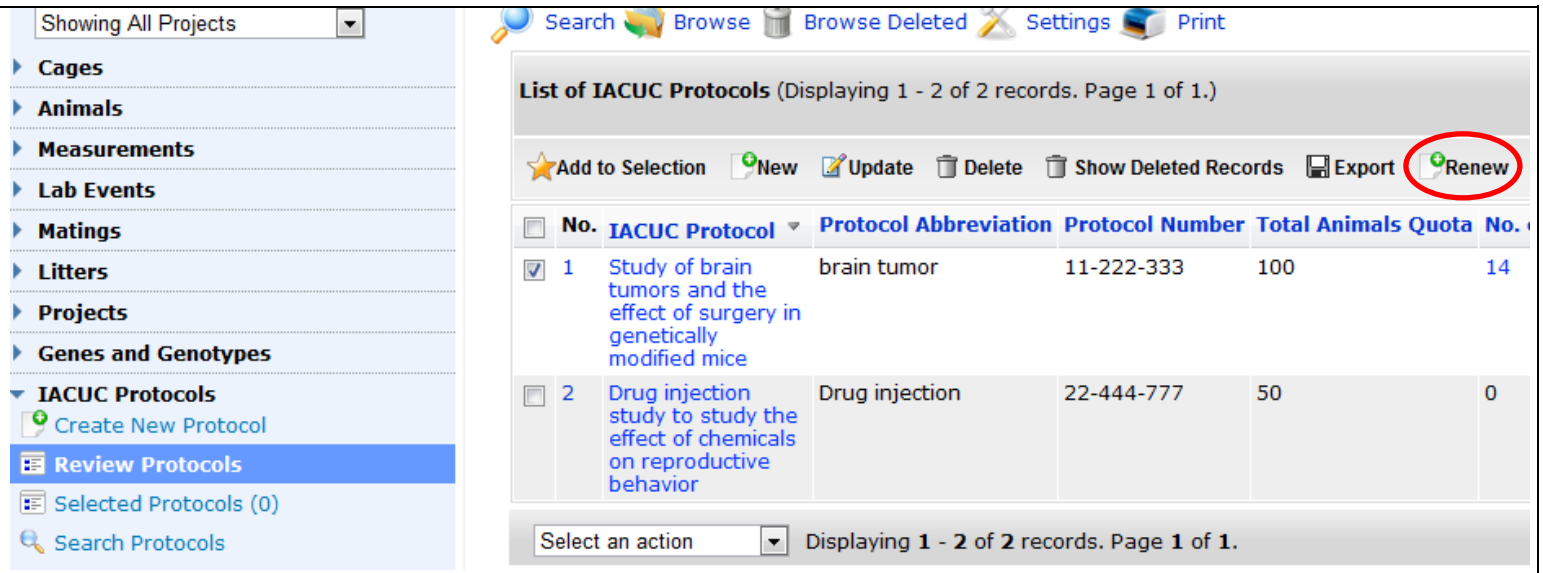
For accurate information and status of your protocol, please contact appropriate parties outside mLIMS.

Renew Protocol

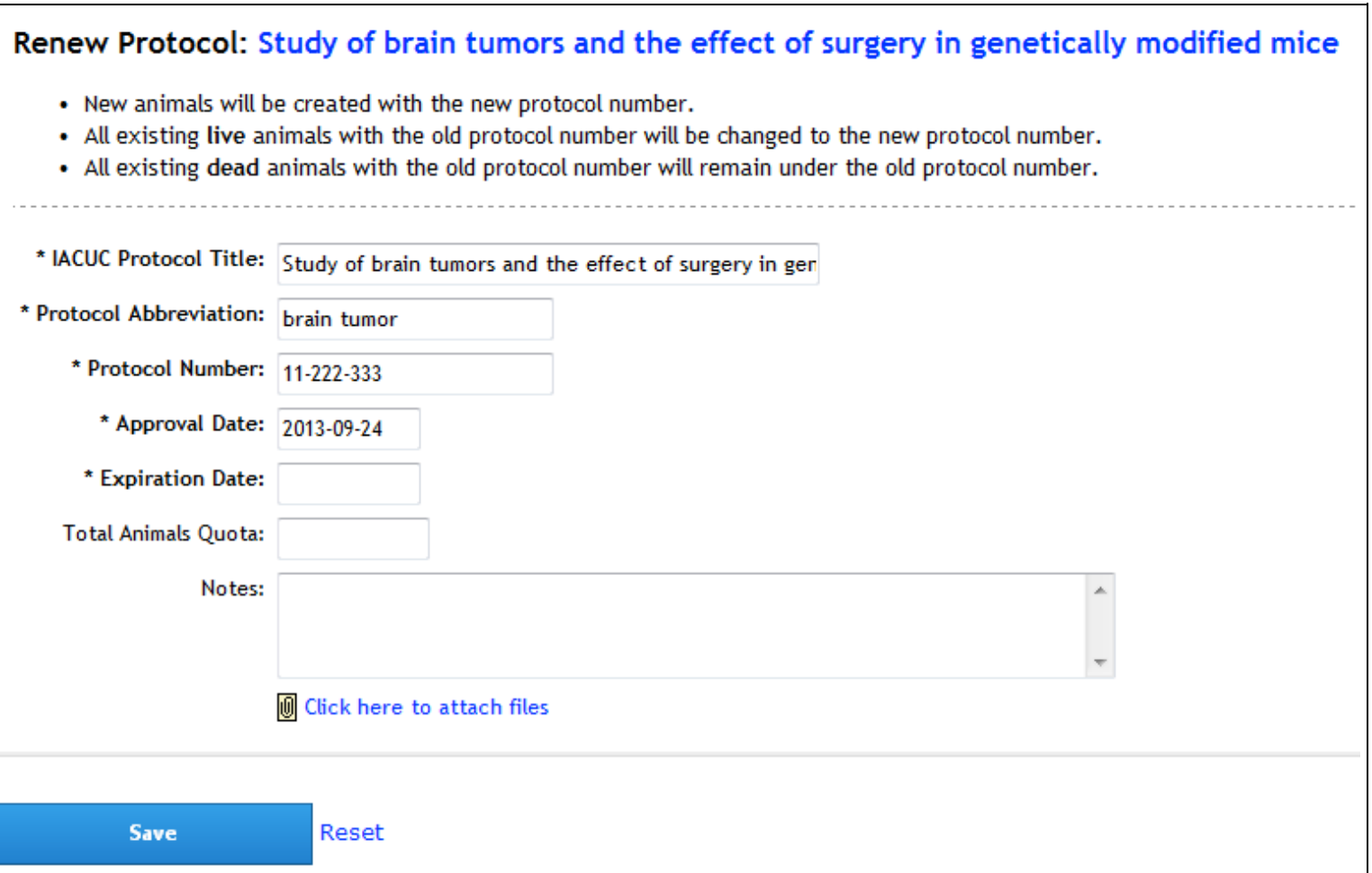
1. **In Review Protocols List, check the check box for the protocol that you are going to renew**



2. **Click on the Renew button**

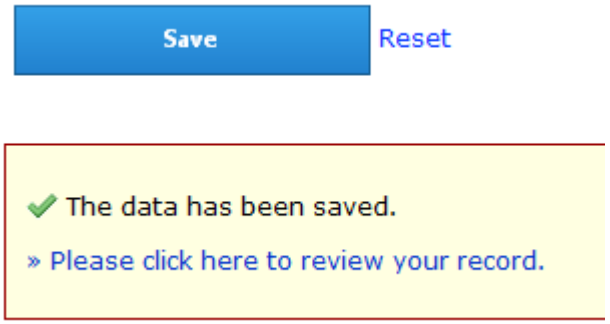


3. Enter information about the new protocol and click Save


Renew Protocol: Study of brain tumors and the effect of surgery in genetically modified mice
New animals will be created with the new protocol number.
All existing live animals with the old protocol number will be changed to the new protocol number.
All existing dead animals with the old protocol number will remain under the old protocol number.
* IACUC Protocol Title:
Study of brain tumors and the effect of surgery in ger
* Protocol Abbreviation:
brain tumor
* Protocol Number:
11-222-333
* Approval Date:
2013-09-24
* Expiration Date:
Total Animals Quota:
Notes:
Click here to attach files
Save
Reset

Note:

When you click Save, all existing **live** animals under the old protocol will be changed to the new protocol. All existing **dead** animals will remain under the old protocol.

4. You will see a message: "The data has been saved" **Click on "Please click here to review your record"**	

5. System will display information about your renewed protocol

Note that you can view all renewal history in the IACUC Protocol Histories tab